

AMERICAN
RAILROAD JOURNAL.
STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, *Editor.*

SATURDAY, JUNE 21, 1856.

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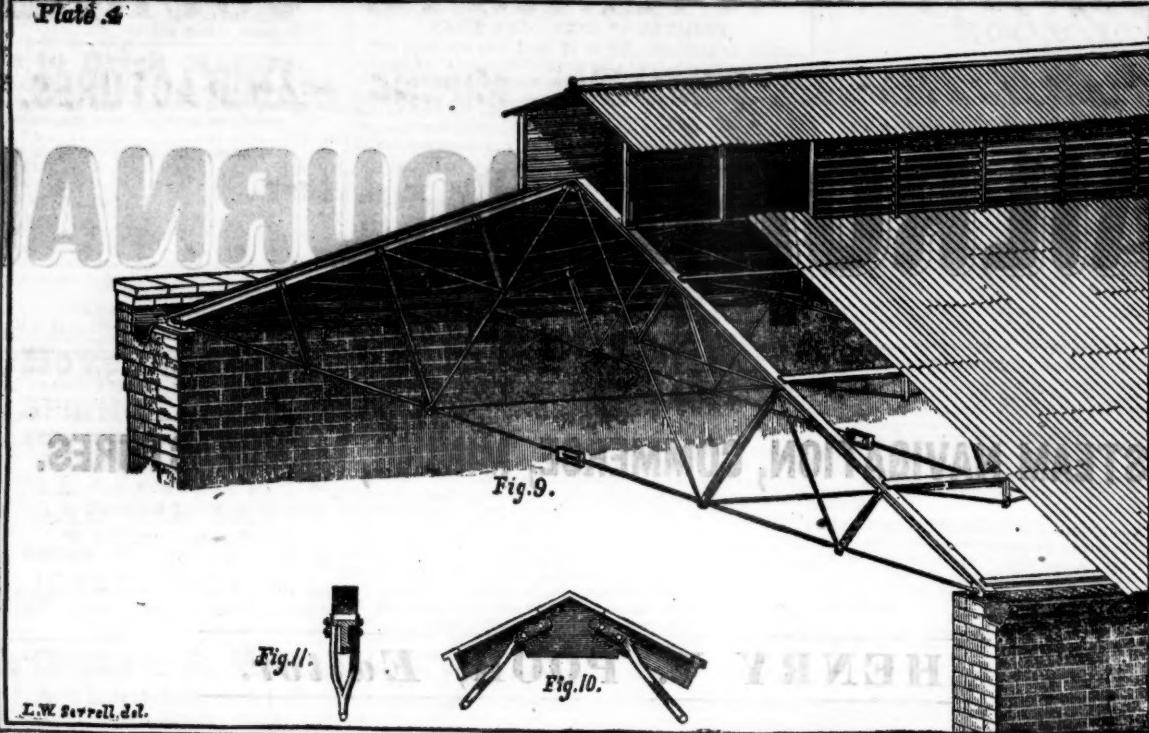
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MARSHALI TITRINGS & BROTHERS.
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ROOFING.

Plate 4.



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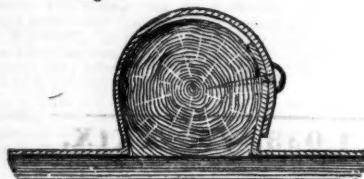
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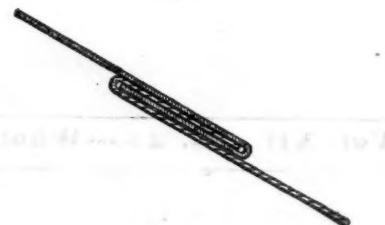
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Fig. 6.



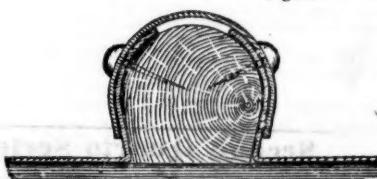
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Fig. 7.



X full size.

Fig. 8.



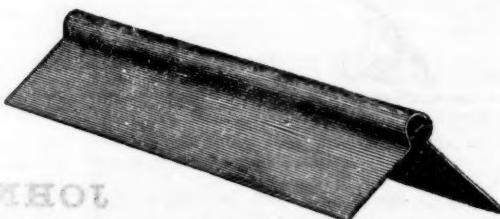
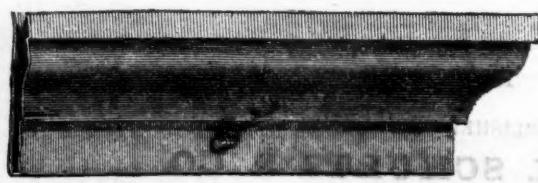
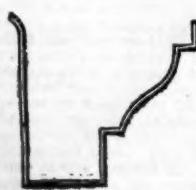
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SECOND QUARTO SERIES, VOL. XII., No. 25.]

SATURDAY, JUNE 21, 1856,

[WHOLE NO. 1,063, VOL. XXIX.]

To Messrs. ALGAR & STREET, No. 11 Clements Lane, Lombard Street, LONDON, are the authorized European Agents for the Journal.

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American Railroad Journal.

PUBLISHED BY J. H. SCHULTZ & CO., NO. 9 SPRUCE ST.

New York, Saturday, June 21, 1856.

Consolidation of the Chicago, Burlington and Quincy, and the Central Military Tract Railroads.

A movement for the accomplishment of this object has been for some time on foot; and circulars have been addressed to the stockholders in both companies, calling for a general meeting to be held in Chicago, on the 9th of July next, for the purpose of deciding upon the terms of consolidation. At a meeting of the Directors of the Chicago, Burlington and Quincy railroad company, on the 5th inst., the following basis for a union of the two roads, to be submitted to their respective stockholders, was adopted by a majority—

The name of the consolidated company shall be the "Chicago, Burlington and Quincy railroad company."

Each stockholder in the Central Military Tract railroad company, in exchange for every share of stock he may hold in that company, shall be entitled to one share of stock in the consolidated company.

Each stockholder in this company shall be entitled to one share of stock in the consolidated company for every share held in this, and in addition thereto shall be entitled to one share in the consolidated company for every two shares held in this company; upon payment therefor within one year, of sixty dollars, with interest thereon at the rate of ten per cent. per annum, and in case any stockholder shall be entitled to a fractional or

half share, he may receive a whole share, on payment of eighty dollars therefor and interest as above, or if he elect not to receive said share he shall be paid twenty dollars for said fraction.

A majority of the stockholders in interest in each of the consolidating companies shall signify their assent to these terms of consolidation in accordance with the Statute in such case, made and provided, at or before the meeting mentioned in the resolutions hereafter.

A resolution was also adopted that the Treasurer prepare a statement of the financial condition of both companies, together with the length of road, amount of rolling stock, &c., owned by each—this circular to be directed to each stockholder, with a request that he signify his assent to or dissent from the terms specified, at the July meeting.

The following is the statement, at 30th April last, of the

CHICAGO, BURLINGTON & QUINCY R. R.

Debit.

Capital stock, 16,391 shares	\$1,639,100
Fifth and final dividend by old Co.	12
Dividend of July 1, 1854	69
" Dec. 31, " frac. stock	162
" June 30, 1855	215
" Dec. 31, "	180
Inconvertible 1st mort., 7 per ct. bonds payable July 1, 1867	640,000
Inconvertible 2d mort., 7 per ct. bonds, payable Oct. 1, 1869	600,000
Bills and acc'ts payable	444,736
Balance income acc't	71,003
	\$3,395,469

Credit.

Construction acc't	\$2,278,595
Equipment	" 606,027
Bills and acc'ts receivable	180,813
Des Moines Co. bonds	8,000
Peoria and Oquawka R. R. Co. bonds	25,000
P. & O. Co. acc't and interest	177,719
Sinking fund	27,000
Balance in Treasury	97,813
	\$3,395,469

The length of the road (main track) is fifty-eight miles.

The rolling stock consists of 27 locomotives, 20 first class passenger cars, 3 second class, 2 baggage, 65 platform freight, and 822 house cars.—The cars are all eight wheeled.

CENTRAL MILITARY TRACT R. R.

The annexed is a statement of the condition of this company, at date of April 30th, 1856:

Debit.		
Capital stock, 12,625 shares	\$1,262,500	
Instalments on part paid stock	569	
Forfeited stock	65	
Inconvertible 1st mort., 7 per ct. bonds, payable July 1, 1864	800,000	
Convertible 2d mort., 8 per cent. bonds, payable March 1, 1868	700,000	
Convertible 8 per cent. bonds, dated April 1, 1854, payable April 1, 1868.	24,000	
Convertible 8 per cent. bonds, dated March, 1856, payable March 1, 1876.	330,000	
Bills and acc'ts payable	279,050	
Unpaid dividends	160	
Balance income acc't	55,254	
	\$3,451,538	
Credit.		
Construction acc't	\$2,603,867	
Equipment acc't	316,274	
Des Moines Co. bonds	8,000	
Peoria and Oquawka R. R. Co. bonds	25,000	
P. & O. Co. acc't and interest	164,307	
Bills and acc'ts receivable	101,111	
Deposits in New York and Boston	237,877	
	\$3,451,538	
The length of the road (main track) is eighty miles.		
The rolling stock consists of 19 locomotives, 6 first class passenger cars, 2 baggage, 50 coal, 51 platform freight, and 116 house cars.		
STATEMENT of the earnings from freight, passengers, miscellaneous and interest, and the operating expenses, taxes, and (one year's) interest on bonds of the Chicago, Burlington and Quincy, and the Central Military Tract railroad companies, for one year, commencing May 1, 1855, and ending April 30, 1856.		
C. B. & Q. C. M. T. R. R. Co. R. R. Co.		
Earnings from May 1, to Dec. 1, '55	\$612,270	\$327,462
Earnings from Jan. 1, to April 30, 1856	208,314	148,986
Ag. earnings for one year	\$820,584	\$471,899
Operating exp's for 8 mos. as above	246,826	184,293
Interest accrued for 8 months as above	57,866	75,946
Interest accrued for 4 months as above	28,933	42,373
Operating expenses for 4 mos. as above	116,581	117,518
	\$450,208	\$370,181
Net earnings for one year	870,875	101,267

The number of shares of stock existing June 30, 1855....	18,975	9,724
Do. Dec. 31, 1855....	14,758	9,724
Do. Apr. 30, 1856....	16,891	12,625
The average number of shares for one year is....	16,175	10,691
The interest on bonds in existence at date becomes due and payable as follows each year:		
C., B. & Q., Jan'y 1.....	\$22,400	
April 1.....	21,000	
July 1.....	22,400	
Oct. 1.....	21,000-\$86,800	
Cen. Mil. Tt. Jan. 1.....	28,000	
March 1.....	41,200	
April 1.....	360	
July 1.....	28,000	
Sept. 1.....	41,200	
Oct. 1.....	960-\$140,820	
STATEMENT of the earnings from freight, passengers, and miscellaneous, and the operating expenses and interest on bonds by the Chicago, Burlington and Quincy railroad company, for the year ending December 31, 1851, being the first year of its operation on dividend acc't.		
Earnings.....	\$302,588	
Operating expenses.....	\$152,105	
Int. accrued on bonds.....	50,697	
	202,808	

Net earnings for the year.....	\$99,779
The number of shares of stock existing June 30, 1851, was.....	6,789
Do. Dec. 31, 1854, was.....	12,087

The managers of the Chicago, Burlington and Quincy road, in their circular to the stockholders, say there is no reason to suppose that the increase of business on the C. M. T. road will not be equal to that on the C., B. and Q. line, while the former being longer, its through business will tend to nearly equalize the receipts of both. On the other hand, by a recent agreement made with the Galena company, the C., B. and Q. company will have the use of that part of the road between Chicago and the Junction at a lower rate than formerly.—A large expenditure, however, for the purchase of depot grounds and accommodations, will be necessary at Chicago; as the Galena company can no longer afford the facilities needed at that point.—It is believed that a consolidation, on the proposed basis, will be productive of advantage to both interests. The Central Military Tract company is financially in an easy condition, having no floating debt; while the other company has a considerable one, and a large outlay is necessary for the Chicago depot, and re-laying several miles of road with new rails. The depot grounds already purchased have cost \$140,000. The machine and repair shops will cost nearly a like amount. The purchase and re-laying of rails will cost at least \$50,000. The floating debt will add \$128,000 to these figures; in all, nearly \$500,000. To raise the means necessary for these purposes will involve a sacrifice and increase the cost of the road, unless some such plan is adopted. The proposed issue of stock upon consolidation will secure the funds necessary. The time allowed for payment is liberal; while many will doubtless prefer paying up at once. Before the year is out, no doubt is entertained that the stock will bear a considerable premium.

The address concludes thus:

"The general advantages to result from consolidation need not be alluded to. They must be apparent to all. The difficulty in this case arises from the fact that the Military Tract road is one year newer than the Chicago, Burlington and Quincy. It is not fully proved, but it is clearly

evident already, that it is to be a successful road. Its first year's business surpassed that of the C., B. and Q. road, and with the extensions west to Burlington and south to Quincy, there can be no reasonable question that its business is to be a very large one. Still, as its business contributes to swell that of the Chicago, Burlington and Quincy, that stock may reasonably be supposed to be the most valuable, though that road has cost, nominally, the most money. It is for this reason that a premium or a bonus of 20 per cent. is to be paid in the consolidation to the holders of stock in that company, and which is deemed by a majority of both Boards, under the circumstances, just and fair.

The difficulty has been, in this case, not so much to ascertain a basis of consolidation which should be advantageous to both, but to determine upon one which should benefit both exactly alike. That both will be benefitted, a majority of the Directors have no doubt, and as they are strongly of the opinion that the interests of both companies require consolidation, they are also of opinion that the company whose business is not fully developed, is, in the consolidation, at least entitled to as favorable a consideration as that whose business is fully known and proved."

Cincinnati, Peru and Chicago Railroad.

We are informed that the affairs of this company are in a very flourishing condition. All the iron is secured for that portion of the road lying between Laporte and Plymouth, the grading is finished, and the road will be completed to the latter point in a short time. Some 15 or 16 miles of the road are already in operation.

Finances of Ohio.

Funded debt to foreign creditors:	
Five per cents of 1856.....	\$85,350
Do. do. 1866.....	1,025,000
Six do. 1856.....	2,428,360
Six do. 1860.....	6,413,325
Six do. 1870.....	2,188,532
Six do. 1875.....	1,600,000
Total.....	\$18,730,567
Domestic creditors.....	277,728
School and Trust Funds.....	2,265,131
Total debt of State Jan'y 1, 1856....	\$16,273,426
State Revenue for 1855.....	\$3,631,173
Balance from 1854.....	584,681
Total.....	\$4,215,854
Interest on Public Debt.....	\$980,249
Reduction of Principal.....	466,681
Common Schools.....	1,217,119
State Government.....	466,972
Public Works.....	290,168
Miscellaneous.....	91,295
	3,512,484

Balance to budget of 1856.... \$703,370

The sources of State Revenue as above, are:

Taxation direct.....	\$2,871,255
Canal tolls and water rents.....	444,827
School lands.....	127,061
Penitentiary.....	64,249
Miscellaneous.....	128,781

Total..... \$3,631,173

Ohio Sinking Fund, 1855.

Taxation (part of above).....	\$1,014,749
Balance from 1854.....	566,783
School lands (as above).....	127,061
Canal tolls (part of above).....	200,000
Miscellaneous.....	92,629

Total income..... \$2,001,222

Interest debt.....	\$980,249
Principal redeemed.....	466,681
Miscellaneous.....	16,793

1,463,723

Balance in hand Jan'y 1, 1856.... \$537,499

The Triton and the Minnows.

(From the London Quarterly Review.)

The voyager up and down the Thames has noticed with astonishment, during the last eighteen months, the slow growth of a huge structure on the southern extremity of the Isle of Dogs. At first a few enormous poles alone cut the sky-line, and arrested his attention; then vast plates of iron, that seemed big enough to form shields for the gods, reared themselves edgewise, at great distances apart; and as months elapsed, a wall of metal slowly arose between him and the horizon. The soty engineer, as he leans over the bulwark of Bridgeport No. 2, when questioned respecting it, tells you it is "the Big Ship"—he knows no more. If, moved by curiosity, the voyager hails a boat and rows ashore, the sturdy oarsman can only tell you it is "the Big Ship." If you question Jack, whom you see coming along the road laden with a green parrot and a bundle of yams, as to what they are doing here, he will eye the huge mass for a moment, and reply with a vacant negative. Even those who are informed of its purpose doubt and argue respecting it. "Look'ee here," said an old salt to us, pointing with his pipe to the stem and stern of the ship, which lie parallel with the river, "here's her stern and here's her stem, and here's her water; and how they are going to launch her I can't figure noways."

The great ship, or "Great Eastern," as she is sometimes called, projected by the eminent engineer Mr. Brunel, the father of Transatlantic Steam Navigation, although building in the midst of the largest collection of sea-faring people in the world, stands a wonder and a puzzle to them all. And indeed, the moment you are inside the works of Scott Russell & Co., at Millwall, you feel the reason of the strange eye with which the maritime population view the monster which is slowly growing up, and overshadowing not only the ship-yard itself, but the portion of the new town immediately in its neighborhood. Where are the merry ship-carpenters, caulking away with monotonous, dead-sounding blows? Where are the artisans chipping with their adzes, rearing up one after another huge ribs, and laying the massive keel? Where are the bright angles gleaming in the sun, as sturdy arms work out the bolt-holes? None of these old accustomed sights and sounds of ship-building are to be found; but in their place we see the arm of steam, mightier than that of Thor, welding some iron shaft big as "the mast of some huge admiral," or punching inch-plates of iron as quickly and as noiselessly as a lady punches card-board for a fancy ornament.—Steel, urged by the same potent master, is seen showing its mastery over iron as the huge lathes revolve, or the planing-machine pursues steadily its resistless course, whilst, in place of the shavings of the carpenter, long ringlets of dull grey metal cumber the ground. The ship-carpenter is transmuted into a brawny smith, and the civil engineer takes the place of the maritime architect. A closer inspection of this Leviathan vessel shows us how completely the employment of a new material has necessitated new ideas with respect to construction. She runs along, or rather will—for she is not yet quite up in frame—some seven hundred feet; those portions of her yet unfinished at stem and stern show her partitions or bulkheads running nearly sixty feet in height, and standing just sixty feet apart. If we examine the outer walls of these huge partitions, we see at once that the ship has no ribs springing from a keel or back bone—none of the ordinary framework by which her bulging sides are maintained in their places; but, on closer inspection, it is found that she has a system of ribs or webs, longitudinal instead of transverse, running from stem to stern of the ship up to eight feet above her deep water-line; and riveted on each side of these thirty-two webs or ribs, which are again subdivided at convenient lengths, are plates of iron $\frac{3}{4}$ of an inch in thickness, forming a double skin to the ship, or a dermis and epidermis. Thus her framework forms a system of cells, which, like the Menai tube, combines the minimum of weight with the maximum

of strength. A glance at the transverse midship section will show at once this portion of her structure. Hitherto it has been the practice to build iron ships in exactly the same manner as regards framework as wooden ones; that is, the strength of the sides has been made gradually to lighten towards the deck, which being of wood, can offer but slight resisting power. Thus iron ships of the old method of construction are peculiarly liable to break their backs upon the application of force, either to their two ends or to the centre of their keels, just, in short, as a tube would be easily broken, one side of which was made much stronger than the other. The "Birkenhead" iron troopship was a melancholy instance of this unscientific method of construction; for it will be remembered that when she struck, her wooden deck doubled up and snapped in two, as a stick would snap across the knee, whilst stem and stern reared for a moment high in the air, and then went down like stones into the deep.

As you stand watching the process of building up this double skin, or framework of the ship, the question immediately strikes the mind, how are these unyielding plates of inch iron made to accommodate themselves to her lines, which are seen to run as finely fore and aft as those of a Thames wager-boat? How are the innumerable curves which die away into each other, to be produced by any aggregation of rectilinear pieces of flat boiler plate? In ordinary wooden ships, the planking, by its elasticity, allows itself to be modelled to the ribs; but here there are no ribs, in the true sense of the word, and the form of the vessel must depend upon the inclination given to each separate piece of iron before the fastening process is commenced. And such in fact is the case. Every individual plate, before being fixed in its proper position, was the subject of a separate study to the engineer. Of the ten thousand, or thereabout, that compose the framework of the ship, only a few situated in the midship section are alike either in size or in curve. For each a model in wood, or "template," as it is technically called, had originally to be made, and by these patterns the plates were cut into their required shapes by the huge steam shears, in exactly the same manner as a tailor cuts out the various portions of a garment. The "list," or inclination to be given to each plate, is the next process to be gone through; and this is produced by passing it through a system of rollers, which can be so reversed in their action, and so adjusted as to give it any required curve. The "template," studded with holes around its margin, is then fitted to it, and a boy with a stick dipped in white lead marks through them the places upon the iron where the rivet-holes are to be punched; when this last process is completed, the plate is lettered with two or three separate letters, indicating the precise place it has to take in the ship. Thus the hull is first carefully thought out in detail, and is then regularly and mechanically put together, in much the same way as a tessellated pavement.

The process of fastening the plates affords another curious contrast to the old method of bolting employed by the ship-carpenters. The holes in the plates to be held together being brought in exact opposition, bolts at a white heat are one by one introduced, and firmly reveted whilst in that condition by a group of three men, one the upholsterer, who holds the bolt in its position by placing a hammer against its head on the inside of the ship, whilst two sturdy Vulcans, with alternate blows, produce the rivet-head on the other. The bolts contract in cooling, and draw the plates together with the force of a vice, and hold them so for ever afterwards. The rapidity with which this process is performed strikes the spectator with astonishment. A set of three men and a boy to shovel the hot bolts out of the furnace, will in the course of a day close up four hundred rivets; and speed in the process is requisite when we remember that before the ship can swim three millions of them must be made secure.

If we clamber up the ladders which lead to her deck, some sixty feet above the ground, we per-

ceive that her interior presents fully as strange a contrast to other vessels as the construction of her hull does. Ten perfectly water-tight bulkheads, placed 60 feet apart, having no openings whatever lower than the second deck, divide the ship transversely; whilst two longitudinal walls of iron, 36 feet apart, traverse 350 feet of the length of the ship. Thus the interior is divided, like the sides, into a system of cells or boxes. Besides these main divisions there are a great number of sub-compartments beneath the lowest deck, devoted to the boiler-rooms, engine-rooms, coal, and cargo, &c.; whilst some 40 or 50 feet of her stem and stern are rendered almost as rigid as so much solid iron by being divided by iron decks from bulwark to keel. Her upper deck is double, and is also composed of a system of cells formed by plates and angle irons. By this multiplication of rectilinear compartments, the ship is made almost as strong as if she were of solid iron, she is rendered as light and as indestructible, comparatively speaking, as a piece of bamboo. There is a separate principle of life in every distinct portion, and she could not well be destroyed even if broken into two or three pieces, since the fragments, like those of a divided worm, would be able to sustain an independent existence.

A better idea, perhaps, of the interior of the ship can be gained at the present moment than when she has progressed further towards completion. As you traverse her mighty deck, flush from stem to stern, the great compartments made by the transverse and longitudinal bulkheads, or parti-walls of iron, appear in the shape of a series of parallelograms, 60 feet in length by 36 in width; numerous doors in the walls of these yawning openings at once reveal that it is here that the hotels of the steamship will be located. If we were to take the row of houses belonging to Mivart's and drop them down one gulf take "Farrance's" and drop it down the second, take Morley's at Charing Cross and fit it into a third, and adjust the Great Western Hotel at Paddington and the Great Northern at King's Cross into apertures four and five, we should get some faint idea of the nature of the accommodation the Great Eastern will afford. We speak of dropping hotels down these holes, because these separate compartments will be as distinct from each other as so many different houses; each will have its splendid saloons, upper and lower, of 60 feet in length; its bed-rooms or cabins, its kitchen and its bar, and the passengers will no more be able to walk from one to the other than the inhabitants of one house in Westbourne Terrace could communicate through the parti-walls with their next door neighbors. The only process by which visiting can be carried on will be by means of the upper deck or main thoroughfare of the ship. Nor are we using figures of speech when we compare the space which is contained in the new ship to the united accommodation afforded by several of the largest hotels in London. She is destined to carry 800 first-class, 2,000 second class, and 1,200 third class passengers, independently of the ship's complement, making a total of 4,000 guests. A reference to the longitudinal and transverse sections will explain her internal economy more readily than words. The series of saloons, together with the sleeping apartments, extending over 350 feet, are located in the middle instead of "aft," according to the usual arrangement. The advantage of this disposition of the hotel department must be evident to all those who have been to sea and know the advantage of a snug berth as near as possible to the centre of the ship, where its transverse and longitudinal axes meet, and where, of course, there is no motion at all. It will be observed that the passengers are placed immediately above the boilers and engines; but the latter are completely shut off from the living freight by a strongly arched roof of iron, above which, and below the lowest iron deck, the coals will be stowed, and will prevent all sound and vibration from penetrating to the inhabitants in the upper stories. As

manner, as the saloons, a peculiar arrangement has been made to connect their machinery without interfering with their water-tight character. Two tunnels, of a sufficient size to give free passage to the engineers, are constructed fore and aft in the centre of the coal bunkers, through all the great iron parti-walls. By this arrangement the steam and water pipes which give life and motion to the ship will be enabled to traverse her great divisions, just as the aorta traverses in its sheath the human diaphragm.

Let us return, however, for a few moments to the deck, in order to give the reader a clear idea of the magnitude of the structure under our feet. The exact dimensions "over all" are 692 feet. There are few persons who will thoroughly comprehend the capacity of these figures. Neither Grosvenor nor Belgrave square could take the Great Eastern in; Berkeley square could barely admit her in its long dimension, and when rigged, not at all, for her mizzen boom would project some little way up Davies street, whilst her bowsprit, if she had one, would hang a long way over the Marquis of Lansdowne's garden. In short, she is the eighth of a mile in length, and her passengers will never be able to complain of being "cooped up," as four turns up and down her deck will afford them a mile's walk. Her width is equally astonishing. From side to side of her hull, she measures 88 feet, the width of Pall Mall; but across the paddle-boxes her breadth is 114 ft., that is, she could just steam up Portland place, scraping with her paddles the houses on either side. With the exception of the sky-lights and openings for ventilating the lower saloons, her deck is flush for and aft. Mr. Brunel has, we think, wisely decided not to trust so precious a human freight and so vast an amount of valuable cargo to a single propelling power, but has supplied her with three—the screw, the paddle, and the sail. Her paddle-wheels, 56 ft. in diameter, or considerably larger than the circus at Ashley's, will be propelled by four engines, the cylinders of which are 6 feet 2 inches in diameter, and the stroke 14 feet. The motive power of these will be generated by four boilers. Enormous as are these engines, having a nominal power of 1,000 horses, and standing nearly 50 feet high, they will be far inferior to those devoted to the screw. These, the largest ever constructed for marine purposes, will be supplied with steam by six boilers, working a force of 1,600 horses—the relative strength of the combined engines being equal to 3,600 horses. The speed of the ship under steam is expected to average 20 miles an hour.

We all know, even on a calm day, what a wind meets the face looking out of a railway train going at that pace, and consequently it can be understood that sails, except on ordinary occasions, would act rather as an impediment than as an assistance to the ship's progress. It is not probable, therefore, that they will be much resorted to except for the purpose of steadyng or of helping to steer her. In case, however, of a strong wind arising, going more than twenty-five miles an hour in the direction of her course, she is provided with seven masts, two of which are square-rigged, and the whole spreading 6,500 yards of canvas.—It will be observed that she carries no bowsprit, and has no sprit sail. We do not know the reason of this departure from the ordinary rig, unless it be to avoid her ploughing too deeply in the sea.—Her bow is also without a figure-head; and this peculiarity, together with her simple rig, gives her the appearance of a child's toy-boat. If beauty is nothing more than fitness, this form of bow is undoubtedly the most beautiful, and the Americans, who have long adopted it in their trans-Atlantic steamers, are right; but to ordinary eyes it looks sadly inferior to the old figure-head projecting out before the ship, as if eager to lead her onward over the wave. Fewer hands will be required to navigate the "Great Eastern" than her size would seem to demand. Her whole crew will not exceed 400 men—a third of the number composing the crew of a three-decker. The difference is made up by what we may term *steam sailors*.—

There will be four auxiliary engines appointed to do the heavy work of the ship, such as heaving the anchors, pumping, and hoisting the sails; for the gigantic arm of steam will be imperatively called for to deal with the vast masses of iron and canvas required to move and to hold the ship.—These engines will, in all probability, communicate their power to a shaft running through an aperture in the upper iron deck, by which arrangement motive power in any required quantity will be laid on from stem to stern of the ship.

It is obvious that some special means must be adopted to direct this vast mass of moving iron as she flies on her course, threatening by her speed destruction to herself and whatever may cross her path in the great highway of nations. The usual contrivances will not apply. No speaking-trumpets, for instance, could make the captain on the bridge heard either by the helmsman, or the look-out at the bow, more than three hundred feet away. Even the engineer, sixty feet beneath him, would be beyond the reach of his voice. As in the railway, we have to deal with distances which necessitate the use of a telegraph, and the "Great Eastern," in this respect, will be treated just like a railway. On ordinary occasions a semaphore will, in the daytime, give the word to the helmsman, whilst at night and in foggy weather, he will be signalled how to steer by a system of colored lights. The electric telegraph will also be employed to communicate the captain's orders to him and to the engineer below.

Thus the nervous system, if we may so term it, of the vessel will be provided for. Starting from the bridge, or post of the commander, which leads directly from his apartments, located between the paddle-boxes, the fine filaments will be extended to the helmsman at the stern, and to the look-out at the bow, whilst a third thread will communicate with the engineer. By this means the captain, or brain of the ship, will be able in a moment to put in motion, to drive at full speed, to reverse the action, or to stop the iron limbs, which toil day and night far out of sight in the deep hold, or as instantly to direct the helm so as to alter the vessel's course.

In most iron vessels great precautions are taken to avoid the incorrectness to which the needle placed on deck is liable, on account of the proximity of attractive masses of metal. The commonest expedient is to have placed high up in the mizen-mast, beyond the influence of the iron sides of the ship, what is called a standard compass, and which may be said to realize Dibdin's "sweet little cherub who sits up aloft, and takes care of the life of poor Jack." In the "Great Eastern" a special stage or frame-work will be erected for this dainty Ariel, at least forty feet in height, and the helmsman will probably either read off the points from above as they appear through a transparent card illuminated like a clock-front, or the shadow of the trembling needle will be projected down a long pipe upon a card below, so as to avoid the necessity of the helmsman looking up, and to obviate the difficulty which would occur in foggy weather. The experiments with respect to this important adjunct to the ship are not yet concluded, however, and we must be considered to speak speculatively as to the plan which is likely to be adopted.

The anchors of this mighty steamer would, with their accessories, alone form the cargo of a good sized ship. The ten anchors with which she will be fitted, together with their stocks, will weigh fifty-five tons. If we add to this ninety-eight tons for her eight hundred fathoms of chain cable, and one hundred tons for her capstans and warps, we shall have a total weight of two hundred and fifty-three tons of material dedicated to the sole purpose of making fast the ship.

It was prophesied that Mr. Brunel's first ship, the "Great Western," would be doubled up as she rested upon the crests of the Atlantic waves, and we all know how the prophecy was fulfilled.—When it was made, indeed, we were very much in the dark as to the size of ocean waves, and it was not until the introduction of long steamers that they could be measured with any accuracy. Dr.

Scoresby, while crossing the Atlantic in one of the Cunard boats, some years since, closely observed the waves, and by means of the known length of the ship, was enabled to form a pretty accurate idea of their dimensions. The old vague account of their being "mountains high" was well known before that time to be an exaggeration; but we do not think even philosophers were prepared for the statement made by this observer at a meeting, some years since, of the British Association, that they averaged no more than twenty feet in altitude, and rarely exceeded twenty-eight feet. The popular impression principally produced by marine painters that waves formed valleys thousands of yards across, down the sides of which ships slid as though they were about to be engulfed, seems to have been equally erroneous; as the maximum length of ocean waves, according to Dr. Scoresby, is six hundred feet; whilst in a moderate gale they are only three hundred, and in a fresh sea about a hundred and twenty feet in length. A moment's consideration of these facts leads to the conclusion that long ships must have a great advantage over short ones with respect to the rapidity with which they make their journey, as it is quite evident that whilst the latter have to perform their voyages by making a series of short curves—much to the impediment of their progress and to the discomfort of their inmates—the former, by ruling the waves with their commanding proportions, make shorter and smoother passages. As steamers grow larger and larger, the curse of sea-sickness must therefore gradually diminish. The "Great Eastern," from her length and the bearing which she will have upon the water, being a paddle and a screw ship, will, in all probability, neither pitch nor roll, and will therefore be most comfortable to the voyager.—Her immense stride, if we may use the term, will enable her to take three of the three hundred ft. waves of an Atlantic gale as easily as a racer would take a moderate sized brook. She will still have to encounter the six hundred feet waves of storms, and there may be those mistrusting her length and the great weight she will carry amidships, in the shape of engines and coal, who may be inclined to repeat with respect to her the prophecy which was made with respect to the "Great Western." Mr. Brunel, by the method of launching which he intends to adopt, will, however, set these misgivings at rest before she even touches the water. Although the total weight of the ship, together with her engines, which will be erected in her whilst she is still on land, cannot be less than twelve thousand tons, she will rest entirely on two points as she enters the water broadside on. No statement could give a more powerful idea of the strength of her fabric. The reasons which have induced Mr. Brunel to adopt this method of launching are given as follows in his Report:

"Launching is generally effected by building the ship on an inclined plane, which experience has determined should be at an inclination of about 1 in 12 to 1 in 15, the keel of the ship being laid at that angle, and the head consequently raised above the stern say 1-15th of the whole length of the ship. In the present case this would have involved raising the fore-part of the keel, or the forecastle, about forty feet in the air, and the forecastle would have been nearly 100 feet from the ground, the whole vessel would have been on an average twenty-two feet higher than if built on an even keel.

"The inconvenience and cost of building at such a great height above ground may be easily imagined, but another difficulty presented itself which almost amounted to an impossibility, and which has been sensibly felt with the larger vessels hitherto launched, and will probably ever long, prevent launching longitudinally vessels of great length. The angle required for the inclined plane to ensure the vessel moving by gravity being, say 1 in 14, or even if diminished by improved construction in ways to 1 in 25, is such, that the end first immersed would become water borne, or would require a very great depth of water before the fore part of the ship would even reach the water's edge. Vessels of 450 or 500 feet in length would be difficult

to launch in the Thames, unless kept as light as possible; but our ship could not be so launched, the keel of the sternpost being required to be, as I before said, about forty feet below the level of the forefoot; some mitigation of the difficulty might be obtained by an improved construction of the ways; but the great length of ways to be carried out into the river would, under any circumstances, be a serious difficulty.

"These considerations led me to examine into the practicability of launching and lowering the vessel sideways; and I found that such a mode would be attended with every advantage, and so far as I can see, it involves no countervailing disadvantages. This plan has been accordingly determined upon, and the vessel is building parallel to the river, and in such a position as to admit of the easy construction of an inclined plane at the proper angle down to low-water mark."

"In constructing the foundation of the floor on which the ship is being built, provision is made at two points to ensure sufficient strength to bear the whole weight of the ship when completed.—At these two points, when the launching has to be effected, two cradles will be introduced, and the whole will probably be lowered down gradually to low water-mark, whence, on the ensuing tide, the vessel will be floated off. The operation may thus be performed as slow as may be found convenient; or if, upon further consideration, more rapid launching should be thought preferable, it may be adopted."

Astonishing as are all the proportions of this monster ship, of course it will not be supposed that mere size is claimed, either by the engineer or the Company to which she belongs, as any merit independently of the substantial benefits which accompany it. Her length is not her only advantage. Indeed, length in steamer is merely a comparative term, and applies entirely to the extent of the river or ocean-path she has to traverse. The "Himalaya," for instance, would be an enormous vessel to run to Margate and back, but is only a full size one to cross the Atlantic or to navigate the Mediterranean. The "Great Eastern," again would be large for the passage to New York, but is only duly proportioned to make a voyage round the world.

It is interesting to note the progressive advance of size in steam-vessels that has taken place within the last thirty years, which the following table will render clear to the reader:

Date.	Name and Description.	Length. ft.	Breadth. ft.
1825	Enterprise, built expressly to go to India, coaling at intermediate stations	122	27 0
1835	Tagus for the Mediterranean.....	182	28 0
1838	Great Western, first ship built expressly for Atlantic passage.....	236	35 6
1844	Great Britain, first large screw ship, and the largest iron ship then projected	322	51 0
1853	Himalaya, iron ship for the Mediterranean.....	370	43 6
1856	Persia, iron ship.....	390	45 0
1856	Eastern steamship, iron.....	680	83 0

Thus the ocean-going steamer of 1856 is nearly six times the length of that of 1825, whilst the difference between their tonnage is still more in favor of the last built vessel. The augmentation has gone on in an increasing ratio, and if it is still to continue, we wonder over what space of water our Leviathan of 1870 will extend! As our commercial steam marine is in the hands of shrewd men of business, it can well be imagined that the reasons for this progressive advance in size are sound. Steamship builders are, in fact, only accommodating the tonnage of their vessels to the length of the voyages they have to perform, so that they may be enabled to carry their own coals over and above their due proportion of cargo. This the 'Great Western' did, and succeeded; this the various screw steamers which have run the

Australian voyage have not done, and consequently they have failed.

No one can fail to have observed that within these last two years steam, in long voyages, has apparently suffered a defeat. Clippers of all kinds, the 'Marco Polos,' 'Red Jackets,' and 'Morning Stars,' seem to have recovered their own again, and in the race round the world, sails have distanced the paddle and the screw. When the question comes to be examined, however, it is clear that it is the want of steam that has caused the failure: vessels, in short, as little fitted to make a passage of thirteen thousand miles, as the 'Sirius,' though by a lucky accident it managed to cross the Atlantic at the same time as the 'Great Western,' was to go a continuous stage of three thousand miles. They have all the expense of the new motive power without its full advantages, and, in consequence of their having to go out of their direct course to coal, they lose from twelve to twenty days on the passage. The tortoise in this instant has not fairly beaten the hare, because the latter has wilfully broken her leg.

Mr. Brunel, in constructing a ship of such large dimensions, is only doing for the long Eastern voyage what he did for the shorter Western one, namely, making her own coal bunkers the bank on which she can draw to any extent during her progress out and home, instead of employing from six to eight ships of 500 tons burthen each to carry fuel for her over half the globe, as the vessels at present running are obliged to do; a system which may be likened to the extravagance of a man who employs half-a-dozen porters to carry parcels which, by proper management, he could manage to stow in his own knapsack.

The Report of the Directors for the year 1853 puts the calculation with respect to her immense advantage, in carrying power so well, that we quote it entire:

"In avoiding the delay of coaling on the voyage, your ships will also escape the great cost of taking coals at a foreign station. Coals obtained on the Indian and Australian route cost, on the average, including waste and deterioration, four or five times as much per ton as in this country. But your ships will take their amount of coals for the voyage from near the pit's mouth, at a rate not exceeding for the best quality, 12s. to 14s. per ton. On the voyage of existing steam vessels to Australia or India and home, the consumption amounts to from 4,000 to 6,000 tons; the cost of which would supply 20,000 tons if taken on board at some port in immediate communication with the coal field.

Each of the Company's ships will carry, besides their own coals, upwards of 5,000 tons measurement of merchandise, and will have 800 cabins for passengers of the highest class, with ample space for troops and lower class passengers. These you will not only be able to carry at rates much smaller than those by any existing steamships, but with an unprecedented amount of room, comfort, and convenience.

In thus determining the size of the ships your Directors believe that they are also obtaining the elements of a speed heretofore unknown; and if hereafter coals applicable to the purposes of steam can be supplied from the mines of Australia, the carrying capacity both for cargo and passengers will be proportionately increased. The great length of these ships will undoubtedly, according to all present experience, enable them to pass through the water at a velocity of at least fifteen knots an hour, with a smaller power in proportion to their tonnage than ordinary vessels now require to make ten knots. Speed is, in fact, another result of great size. It is believed that by this speed, combined with the absence of stoppages, the voyage between England and India, by the Cape, will be reduced to from thirty to thirty-three days, and between England and Australia to thirty-three or thirty-six days."

It may be objected that the route by way of Egypt, now that the railway is in progress and a canal is projected, will prove a too powerful competitor for the traffic round the Cape; but inde-

pendently of the inconvenience and tediousness of embarking and then re-embarking, which will be fatal to vessels containing such bulky cargoes as cumber the Australian steamers, it is asserted that the ocean path is the direct route to the focus of Australian connexion with Europe. Thus the navigable distances from Land's End to Port Philip are as follows:—

	Miles.
Via the Cape of Good Hope	11,818
" Cape Horn	12,700
" Gibraltar, Malta, Alexandria, Aden,	
Point de Galle, and Singapore, including transit through Egypt	12,084
" Panama including transit across the Isthmus	12,678

The General Association for the Australian Colonies have indeed recommended for the mail line the overland route as far as Aden, and from thence by way of Diego Garcia and King George's Sound to Melbourne, an estimated distance of 10,348 miles, which they fancy can be done in forty-four days. If the Eastern Steamship Company have not anticipated too great a speed for their vessel—and we scarcely think they have done so, considering that the 'Persia' has made fourteen and a-half knots with very far inferior powers of propulsion—this passage will be beaten by between eight and ten days without the expense and trouble of making a long land journey across the isthmus. Surely this, if it comes to pass, will go far to accomplish the Alnashar dream of the 'Times' that the period will arrive when we shall be able to communicate with our friends at the antipodes in a month.

As far as the commercial part of the speculation goes, we are of course incapable of giving an opinion. The value of the exports to the young empire, which is springing up with such rapidity in Polynesia, is, however, so great—in 1853 the declared value being £14,506,532—that we cannot conceive there would be any lack of cargo even for our Leviathan. That she will be *par excellence* the emigrant ship, who can doubt when we find that, with all her splendid accommodation, she will be able to take passengers of the first class for £65, of the second class for £35, and of the third class for £25.

Her great proportions will indeed almost deceive her passengers into the idea that they are sojourning in some noble mansion. Let us imagine her saloons blazing at night with gas, which will be manufactured on board and supplied to every part of the ship: let us picture to ourselves her magnificent sweep of deck filled with gay promenaders, listening to the band as she sails over a summer's sea; annoyed by no smoke, for in consequence of the use of anthracite coal, none will be emitted from her five funnels; and distressed by no motion, as in consequence of her length she will stride with ease over the waves of the Pacific. We might also dwell for a moment upon the mighty larder of our Leviathan prepared for her flight of five and thirty days, without a stoppage, across the ocean desert with a whole town on board; or we might draw a comparison between her and the Ark (which by-the-by had not half her capacity) as she receives on board her flocks and herds to furnish fresh meat for the passage. But we believe we have said enough to enable those who have not visited the rising edifice, to realize the vast extent of this latest experiment in ship-building.—And as a contrast to this fair side of the medal, let us fancy her rushing through the night in full career—an arrow 27,000 tons in weight, propelled by a bow of 3,000 horse-power. Can we without a shudder contemplate the possibility of a collision with such a resistless force? a line-of-battle-ship with a thousand hands on board clef in two as swiftly as the apple by the shaft of Tell?

Every precaution will indeed be taken to avert such a catastrophe. The electric light will be fixed at the mast-head, so that in dark nights the ship will carry a moonlight atmosphere wherever she goes. In case of any fatal injury to herself, which could not well happen, boats have been provided capable of taking off her passengers.

Thus she will have two screw-steamer of 90 feet in length as paddle-box boats, and in addition to those she will carry a large number of the new collapsing, or bellows boats, as the sailors call them. These curious structures, the invention of the Rev. E. L. Berthon, expand and shut like a Gibson hat or the head of a carriage, occupying so little room that half a dozen of them of a large size can be stowed away in the same space as would be occupied by an ordinary jolly-boat, and seem to be as easily opened as a parasol or umbrella.

Canals in Pennsylvania.

Schuylkill Navigation,	
From Philadelphia to Port Carbon	108 miles.
Delaware Division of State Canal,	
From Bristol to Easton	60 "
Lehigh Navigation,	
From Easton to Stoddartsville	84 "
Union Canal,	
From Reading to Middletown—	
main line	77
Branch to Pine Grove	22
Total	99 "
Susquehanna and Tidewater,	
From Columbia to Havre de Grace	45
Deduct for portion in Maryland	13
Pennsylvania portion	32 "
Main Line of State Canal,	
From Columbia to Hollidaysburg,	
east division	173
From Johnstown to Pittsburg, west division	103
Total	276 "
Susquehanna Division of State Canal,	
From Juniata Junction to Northumberland	41 "
West Branch State Canal,	
From Northumberland to Farrandsville	76 "
Lower North Branch Division of State Canal,	
From Northumberland to Pittston	73
Upper North Branch Division,	
From Pittston to New York line	94
Total	167 "
Wisconsico Canal,	
From Clark's Ferry to Millersburg	13 "
Delaware and Hudson Canal,	
From Honesdale to Hudson river	108
Deduct portion in New York	83
Pennsylvania portion	25 "
Erie Canal,	
From Beaver, on the Ohio, to Erie city	136
French Creek Feeder,	
From near Meadville to Evansb'g	21
Total	157 "
Pennsylvania and Ohio Cross Cut Canal,	
From near New Castle to Akron	78
Portion in Ohio about	68
Portion in Pennsylvania	10 "
Monongahela Navigation,	
From Pittsburgh to within ten miles of Virginia line	84 "
Bald Eagle and Spring Creek Navigation,	
From Bellefonte to West Branch of Susquehanna	25 "
Congestoga Navigation,	
From Lancaster to Safe Harbor	18 "
Youghiogheny Navigation,	
From McKeesport to West Newton	18 "
Total	1293 miles.
East of the Alleghany Mountains	921
West	372
Total	1293 miles.
—Phila. Railroad and Mining Register,	

Railway Share List,

[Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.]

NAME OF COMPANY.	Length of Road.						Dividend for do.	Price of Shares.	NAME OF COMPANY.	Length of Road.						Dividend for do.	Price of Shares.	
	Capital paid in.	Debt.	Total cost of road & equip't.	Gross Earnings for last official year.	Net Earnings for do.	Dividend for do.				Capital paid in.	Debt.	Total cost of road & equip't.	Gross Earnings for last official year.	Net Earnings for do.	Dividend for do.			
Atlantic & St. Lawrence	140	1,538,100	2,973,700	6,019,929	470,647	6	65		Brunswick and Florida, Ga.	30	300,000	800,000	550,000	In progr.				
Androscog. & Kennebec	55	642,343	1,473,080	2,245,000	190,605	90,797	none	14	South Western	92	1,097,496	465,500	1,824,920	253,306	141,168	8		
Kennebec & Portland	55	1,114,725	1,661,230	2,470,800	112,491	6	50		Tennessee and Alabama	30	246,486	-----	679,906	In progr.				
Portl. Sagin. & Portsmith	51	1,367,000	119,230	1,456,827	270,214	112,491	6	50	Tennessee and Mississ.	92	170,931	-----	175,240	In progr.				
Boston, Concord & Montreal	51	8,083,093	5,051,512	7,771,100	235,284	120,854			Memphis and Charlestown	217	2,179,440	2,127,002	4,028,796	311,631	159,572			
Cheshire	53	2,056,925	804,313	3,170,687	350,221	143,565	2	79	Mobile and Ohio	153	2,568,555	1,802,921	4,536,412	199,932	109,236			
Concord	35	1,500,000	8,242	1,412,576	338,949	136,484	6	79	Miss. Central	188	642,534	none	628,303	In progr.				
Northern N. H.	82	2,768,400	none	3,016,633	370,529	138,299	2 1/4	42	N. O., Opelousas & G. W.	66	2,930,426	671,645	2,657,565	In progr.				
Coast & Passavant Riv.	61	1,048,145	787,605	1,769,062	191,687	95,173	none		Vicksburg, Shreveport & Tex.	111	117,750	none	197,896	In progr.				
Butland & Burlington	120	2,228,376	2,662,396	5,878,482	894,971	none			East Tennessee and Ga.	111	1,000,000	1,500,000	2,500,000	In progr.				
Vermont Central	117	5,000,000	3,550,220	8,463,366	820,119	214,793	none		East Tennessee and Va.	16	626,426	928,593	1,033,781	In progr.				
Boston and Lowell	27	1,830,000	325,635	2,188,565	489,754	140,377	6	66	Nash. and Chattanooga	161	2,319,330	1,497,081	3,483,694	316,090	112,177	none		
Boston and Maine	83	4,076,974	150,000	4,179,536	864,426	338,000	6	91 1/2	Covington and Lexington	98	1,302,804	2,235,939	3,738,753	264,973	138,694	16		
Boston and N. Y. Central	74	2,240,300	1,618,671	3,483,818	60,917	8,740	none		Lexington and Frankfort	29	430,055	158,009	637,071	93,263	43,635	6		
Boston and Providence	55	3,160,000	350,132	3,677,154	558,671	219,639	none		Lexington & Big Sandy	-----	-----	428,057	In progr.					
Boston and Worcester	68	4,500,000	556,428	4,865,439	1,008,004	404,461	6 1/2	88 1/2	Lexington and Danville	66	694,444	52,734	747,171	In progr.				
Cape Cod	47	681,690	280,598	997,252	119,221	65,527	3	49 1/2	Louisville and Frankfort	66	698,236	669,061	1,589,566	244,014	96,902	6		
Connecticut River	52	1,591,110	278,261	1,802,244	286,568	108,787	5 1/2	48	Atlantic & Gt. Western	264	806,939	77,294	613,231	In progr.				
Haston, Mass.	60	2,583,400	2,047,737	4,621,210	647,281	306,998	-----		Bellefontaine and Ind.	118	1,881,635	2,025,925	2,852,652	298,293	140,823	40		
Fitchburg	67	3,540,000	153,700	7,766,998	651,163	225,071	-----		Clev., Col., and Cincin.	141	4,547,020	122,857	4,613,722	1,290,295	732,056	9	105	
North-Eastern	30	800,242	928,586	982,521	In progr.	-----			Cleveland and Toledo	200	2,675,425	2,089,301	5,124,629	736,272	306,986	10	76	
N. Bedford and Taunton	21	500,000	none	533,958	186,491	56,533	5 1/2		Clev. and Mahoning	103	-----	628,533	In progr.					
Old Colony and Fall River	87	3,015,100	292,650	3,862,949	653,499	295,738	6	87 1/2	Clev. and Pittsburg	132	2,780,744	3,043,992	5,57,466	581,877	309,518	62		
Vermont and Mass.	77	2,232,641	1,633,670	3,209,727	268,726	87,313	none		Cin., Hamlt. & Dayton	60	2,158,900	1,321,213	987,757	508,271	278,012	62		
Western, Mass.	155	5,150,000	5,964,420	10,495,906	1,869,673	633,018	7	93	Cin., Wilm. & Zanesv.	131	1,126,450	1,181,263	2,326,459	In progr.				
Worcester and Nashua	48	1,414,000	205,565	1,351,271	204,780	15,760	2	43	Columbus and Xenia	55	1,484,550	149,000	1,451,723	356,366	187,518	10	86 1/2	
Prov'g and Worcester	43	1,510,020	338,461	1,806,696	311,430	188,057	-----		Dayton, Xen., & Belpre	63	437,838	422,868	860,496	In progr.				
Hartford and N. Haven	72	2,359,000	939,000	3,813,923	730,012	328,799	10	121 1/2	Dayton and Michigan	140	1,076,002	393,011	1,185,826	In progr.				
Hart'd, Prov. and Fishkill	128	1,845,610	2,090,124	4,060,869	256,685	119,611	none		Eaton and Hamilton	42	454,690	904,489	1,155,153	171,929	65,000	23		
Housatonic	110	2,000,000	474,177	2,429,066	380,792	18,361	none		Mad River and L. Erie	206	2,451,650	572,932	4,446,161	1,27,400	64,552	15		
Naugatuck	67	1,051,800	573,995	1,577,167	238,266	none	4		Ohio and Penn.	187	2,451,700	3,219,000	3,670,700	1,111,626	662,117	9		
N. York and N. Haven	62	3,000,000	2,776,374	5,376,803	884,306	338,877	none	25	Pittabg. Mayw'e & Cin.	50	371,350	31,000	310,000	390,933	In progr.			
N. Haven and N. London	60	788,268	785,165	1,450,318	88,007	30,318	none		Sand'y, Manaf. & New'k	127	1,350,000	2,206,367	3,552,387	328,968	164,479	none		
N. London, W. & Palmer	66	509,200	1,073,673	1,584,383	124,044	66,331	none		Scioto & Hocking Valley	135	403,975	60,050	388,868	In progr.				
Norwich and Worcester	62	2,122,300	873,489	2,597,153	304,236	88,458	2 1/2	30	Springfield, Mt. Vernon & P.	113	1,000,000	950,000	-----	In progr.				
Albany Northern	32	439,005	1,625,098	1,840,695	117,716	9,904			Tol. Wabash & St. Louis	242	2,500,000	4,530,000	-----	In progr.				
Black River and Utica	35	643,330	317,859	974,323	In progr.	-----			Galena and Chicago	255	4,196,079	1,006,125	2,080,433	In progr.	6			
Buffalo, Corn. and N. Y.	100	1,487,874	1,601,183	2,819,066	172,476	66,338	none		Illinois Central	627	2,271,050	19,416,392	20,374,446	1,582,118	527,952			
Buffalo and N. Y. City	92	798,439	2,577,849	3,401,868	288,392	31,896	none		Evansv'e & Crawford	109	706,945	1,176,596	1,844,541	127,400	64,552			
Buffalo and St. Line	69	1,300,000	1,040,000	2,494,364	369,750	355,763	10		Ind. and Cincinnati	88	2,121,723	1,442,869	2,178,461	356,012	193,142	7		
Canandaigua and Elmira	97	434,111	922,398	1,275,796	174,089	69,506			Indiana Central	66	611,400	1,261,179	1,907,911	350,176	184,375	50		
Canandaigua & Niagara F's	98	1,315,000	2,727,854	3,495,823	110,361	33,000			Ind. Clev. & Pittsburgh	83	884,157	1,101,971	1,671,544	1,077,312	In progr.			
Cayuga and Susquehanna	86	687,000	506,689	1,187,562	155,433	48,849	none		Jeffersonville	66	1,014,252	400,000	-----	206,544	94,318	none		
Hudson River	144	3,758,466	9,250,362	12,737,898	1,812,087	603,946	none		Madison and Indianopolis	87	1,647,700	1,336,516	2,056,000	286,146	112,880	none		
Long Island	95	1,875,148	666,949	2,656,865	301,798	116,462	none		New Albany and Salem	288	2,585,121	5,281,848	6,643,189	645,827	371,402	none		
New York Central	564	24,154,560	14,462,742	25,528,913	1,563,581	8,162,128	8	56 1/2	Peru and Indianopolis	73	-----	658,314	-----	150,000	90,000	none	18	
New York and Erie	564	10,023,958	25,126,669	33,439,482	5,458,093	2,627,118	none		Terre Haute and Ind.	73	974,800	604,355	1,502,166	287,512	189,702	10		
New York and Harlem	138	5,171,100	4,069,768	8,758,203	1,035,577	234,126	none		Chicago and Rock Isl'd	182	3,141,500	2,387,155	5,214,152	In progr.				91 1/2
Northern N. Y.	29	467,200	204,189	749,683	In progr.	-----			Chicago and St. Louis	220	-----	1,077,312	-----					
Patterson & Saratoga	25	610,000	140,000	896,423	241,149	82,600	7		Chicago, Burl. and Quincy	138	1,475,300	1,811,557	2,761,429	722,550	379,821	20		
Saratoga and Whitehall	48	500,000	355,600	71,009	218,099	21,089	none		Chic., St. Paul & F'd de Lac.	178	2,300,000	1,325,000	3,625,000	In progr.				
Syracuse & Bingham'tn	80	768,369	1,578,804	2,272,777	159,494	22,508	none		Galena and Chicago	298	3,334,800	1,189,304	5,866,263	1,506,710	942,231	17	110 1/2	
Troy and Boston	27	437,880	373,079	1,109,822	166,363	55,184			Illinois Central	627	2,271,050	19,416,392	20,374,446	1,582,118	527,952	99		
Watertown and Rome	97	1,370,378	700,979	2,068,063	404,374	172,474	3 1/2</td											

Railroad Bonds.

NAMES OF COMPANIES (The following quotations are ex- -interest.)	Amount of Loan.	Description of Bonds.	Rate Int.	Interest pay- able.	Where payable.	Deb.	Offred.	Asked.
Alabama and Tennessee River	\$88,000	1st mortgage, convertible	7	1st Jan. 1st July	N.Y.	1872	85	
Buffalo and State Line	500,000	Do. convertible	7	April, October	"	1866	97 1/2	
Bellefontaine and Indiana	600,000	Do. convertible	7	Jany, July	"	1866	90	
Do. do.	200,000	Real estate, convertible	7	Jany, July	"	1858		
Central Ohio	1,250,000	1st mort. conv. east. sec.	7	Feby, August	"	1859		
Do. do.	200,000	2d jo. convertible	7	Divers	"	1861-64	77	79
Cincinnati, Hamilton, and Dayton	800,000	1st mortgage convertible	7	March, Sept.	"	1866		
Do. do.	465,000	2d jo. do.	7	20.Jan. 20.July	"	1867	91	
Cincinnati, Hamilton, and Marietta	2,500,000	1st mortgage, conv. till 1862	7	Jany, July	"	1868	62 1/2	
Cincinnati, Wilmington, and Zanesville	1,200,000	Do. convertible	7	May, Novemb.	"	1862	85	
Cleveland, Palmeville, and Ashtabula	567,000	Do. convertible	7	Feby, August	"	1861	91	
Cleveland and Pittsburgh	800,000	Do. convertible	7	Feby, August	"	1860	93	
Do. do.	1,200,000	Do. on Branches	7	March, Sept.	"	1873	75	
Cleveland and Toledo	525,000	Do. convertible	7	Feby, August	"	1863	86	87 1/2
Chicago and Mississippi	800,000	Do. conv. till 1867	7	April, October	"	1862-72	80	
Do. do.	1,200,000	Do. convertible	7	April, October	"	1862-72	80	
Covington and Lexington	400,000	Do. do.	6	April, October	"	1862	72	75
Delaware, Lackawanna, and Western	1,000,000	2d mortgage, convertible	7	March, Sept.	"	1883	66	
Fort Wayne and Chicago	1,250,000	Do. conv. till 1863	7	April, October	"	1875	90	
Gaona and Chicago	2,000,000	Do. convertible	7	Jany, July	"	1873	80	
Great Western (Illinois)	1,000,000	1st mortgage, do.	10	April, October	"	1863	94	96
Green Bay, Milwaukee, and Chicago	400,000	Do. convertible	8	10.April. 10.Oc.	"	1863	94	
Jeffersonville	300,000	Do. 2d sec. incov.	7	April, October	"	1873	75	
Indiana Central	600,000	Do. convertible	7	May, Novemb.	"	1866	90	
Indianapolis and Bellefontaine	450,000	Do. do.	7	Jany, July	"	1860-61	82 1/2	
Indianap. & Cin'ti (for Law. & U. M.)	500,000	Do. conv. till 1857	7	March, Sept.	"	1866	86	
La Crosse and Milwaukee	950,000	1st mort. 1st sec. conv. till 1864	8	May, Novemb.	"	1874	85	
Lake Erie, Wabash, and St. Louis	3,400,000	1st mortgage, conv. till 1869	7	Feby, August	"	1865	75	
Little Miami	1,500,000	Do. incov.	6	2d May. 2. Nov.	"	1883	80	81
Michigan Central	1,000,000	No mortgage, convertible	8	April, October	Boat.	1860	99 1/2	100
Do.	600,000	Do. do.	8	March, Sept.	"	1869	100	101
Milwaukee and Mississippi	600,000	1st mort. 1st sec. conv. till 1867	8	Jany, July	N.Y.	1862	98 1/2	
Do. do.	650,000	Do. 2d do.	8	April, October	"	1863	97	
New Albany and Salem	1,250,000	Do. 3d do.	8	June, Decemb.	"	1877	88	89
Do. do.	500,000	Do. 1st section	10	April, October	"	1858-62		
Northern Cross	2,325,000	Do. oth. sec. conv. till 1858	8	May, Novemb.	"	1864-75		
Ohio and Indiana	1,200,000	1st mortgage, convertible	8	Jany, July	"	1873	95	
Ohio and Pennsylvania	1,000,000	Do. do.	7	Feby, August	"	1867	90	
Do. do.	1,750,000	Do. do.	7	Jany, July	"	1865-66	95	96
Pennsylvania (Central)	2,000,000	Income, convertible	7	April, October	"	1872	80	
Racine and Mississippi	5,000,000	1st mortgage, conv. till 1860	6	Jany, July	Philad.	1860	96	96 1/2
Scioto and Hocking Valley	630,000	Do. conv., sink'g f'd	8	Feby, August	N.Y.	1875	85	
Steubenville and Indiana	300,000	Do. 1st sec. conv.	7	May, Novemb.	"	1861		
Terre Haute and Indianapolis	1,500,000	Do. convertible	7	Jany, July	"	1865	80	
Terre Haute and Alton	600,000	Do. do.	7	March, Sept.	"	1863	98	100
Do. do.	1,000,000	Do. do.	7	Feby, August	"	1862-77	77	78 1/2
	2,000,000	2d do.	8	Feby, August	"	1870	73	75

NAMES OF COMPANIES. (The following quotations include the accrued interest.)	Amount of Loan.	Description of Bonds.	Rate Int.	Interest pay- able.	Where payable.	Deb.	Offred.	Asked.
Baltimore and Ohio	2,500,000	Mortgage	6	April, October	Balt.	1885	83 1/2	83 1/2
Do. do.	1,128,500	Do.	6	Jany, July	"	1875	88	
Chicago and Rock Island	2,000,000	1st mortgage, conv. till 1868	7	10.Jan. 10.July	N.Y.	1870	97	98
Erie Railroad	3,000,000	1st mortgage	7	May, Novemb.	"	1867	106 1/2	107
Do.	4,000,000	2d mortgage, convertible	7	March, Sept.	"	1859	97 1/2	
Do.	6,000,000	3d mortgage	7	March, Sept.	"	1883	94 1/2	95 1/2
Do.	4,000,000	Not conv. Bank Fund, \$420,000	7	Feby, August	"	1875	90	91
Do.	4,351,000	Convertible, Inscription	7	Feby, August	"	1871	86	85 1/2
Do.	3,500,000	Convertible	7	Jany, July	"	1862	87 1/2	88 1/2
Hudson River	4,000,000	1st mortgage, Inscription	7	Feby, August	"	1860-70	99	100
Do.	2,000,000	2d do.	7	16.June.16.Dec	"	1860	91	92
Do.	3,000,000	3d do. convertible	7	May, Novemb.	"	1870	67 1/2	67 1/2
Illinois Central	17,000,000	Mortgage, convertible	6	April, October	"	1875	87	87 1/2
Do. (Free Land)	3,000,000	M'g: 345,000 acres-prv. 7 shar's	7	March, Sept.	"	1860	92 1/2	93
Michigan Southern	1,000,000	1st mortgage, convertible	7	May, Novemb.	"	1860	92	97
New York and Harlem	1,800,000	Do.	7	May, Novemb.	"	1861-72	84	85
New York and New Haven	750,000	No mortgage, do.	7	June, Decemb.	"	1855-60	75	80
New Haven and Hartford	1,000,000	1st mortgage, do.	6	Jany, July	"	1873	91 1/2	93
Northern Indiana	1,000,000	Do. do.	7	Feby, August	"	1861	91	93
Do. Gothen Branch	1,500,000	Do. do.	7	Feby, August	"	1868	85	86
New York Central	8,287,000	No mortgage, do.	6	May, Novemb.	"	1883	57 1/2	57 1/2
Do. do.	3,000,000	No'm'e conv. from June 57-69	7	15.June.15.Dec	"	1864	103	103 1/2
Panama, 1st issue	900,000	Convertible till 1866	7	Jany, July	"	1865	101	103
Do. 2d do.	1,478,000	Do. till 1868	7	Jany, July	"	1866	101	103
Reading, issued 1843	1,573,000	Mortgage, convertible	6	Jany, July	Phila.	1860	92	
Do. do. 1843-'48-'49	1,300,000	Do. convertible	6	Jany, July	"	1870	84 1/2	85
Do. uo. 1849	3,469,000	Do. convertible	6	April, October	"	1870	84 1/2	85

CITY SECURITIES.	Int'st payable.	Off'd	Asked	CITY SECURITIES.	Int'st payable.	Off'd	Asked		
New York 7 per ct.	1857	Feb'y,	100	101	Milwaukee, 7 per ct. coup.	X	Divers	87	88
Do. 5 do.	1858-'60	May	94 1/2	New Orleans, 6 per ct. B.R. X	Do.	1860	76	80	
Do. 5 do.	1859-'75	August, and	92	95	N.O. 6 per ct. ep. municip. X	Do.	1861	81	87
Do. 5 do.	1890	November	94	95 1/2	Philadelphia, 6 per ct. -1876-'98	Jany, July	90	90 1/2	
Albany, 6 per ct. coup.	1871-'81 X	Feb'y, August	97	98	Pittsburgh, 6 per ct. coup.	X	Divers	72 1/2	74
Allegheny, 6 per ct. coup.	1879-'90	Quarterly	97	98	Quincy, 8 per ct. coup.	-1888 X	Jany, July	-----	
Baltimore, 6 per ct. coup.	1879-'90	April	97	98	Racine, 7 per ct. coup.	-1873 X	10. Feby, Aug	-----	
Boston, 5 per ct. coup.	1879 X	Jan'y, July	98	99	Rochester, 6 per cent. coup.	X	Divers	96	-----
Brooklyn, 6 per ct. coup.	Long X	Jan'y, July	100	101	St. Louis, 6 per ct. coup. Long X	Do.	78	79	
Cle'rfd, 7 per ct. ep.	W.W. 1879 X	Do.	101 1/2	102 1/2	Do. do. Municipal	Do.	79	80 1/2	
Cincinnati, 6 per ct. coup.	1873-'77 X	Jan'y, July	90	90	Sacramento, 10 p. ct. ep. 1862-'74 X	Do.	76	77	
Chicago, 6 per ct. coup.	1880 X	Jan'y, July	100	100 1/2	S.F. Francisco, 7 p. a.c.p. 1865, pay. N.Y. X	May, Novemb.	80	80	
Do. 7 per ct. coup.	1880 X	Jan'y, July	100	100 1/2	Do. 10 p. ct. op. 1871 X	Do. do.	96	93	
Detroit, 7 per ct. ep.	W.W. 1873-'78 X	Feby, August	100	102 1/2	Do. 10 p. do. pay. N. Y. X	Jany, July	104	104	
Dubuque, 8 per ct. ep.	Long X	March, Sept.	101	105	Do. 6 per ct. pay. N.Y. 1875 X	Do. do.	57 1/2	59	
Jersey City, 8 p. c. ep.	WW. 1877 X	Jan'y, July	94	97	Do. 6 p. ct. pay. Mun. 1874 X	March, Sept.	81	87 1/2	
Louisville, 6 per ct. ep.	1880-'83 X	Divers	79 1/2	80	Do. 6 p. ct. pay. Mun. 1874 X	April, October	97 1/2	101	
Memphis, 6 per ct. coup.	1882 X	Jan'y, July	70	70	Do. do.	-----	97 1/2	101	

Cincinnati Stock Sales.

By KIRK & CHEEVER.

For the week ending June 10th, 1856.

Per ct. bonds.

Little Miami, 6 per ct. Mort.	81
Covington & Lexington, 2d Mort. 7 per ct.	64
Ohio & Mississippi, 2d Mort. 7 per ct.	80
Indiana & Cincinnati, 2d Mort. 7 per ct.	77
Cin. Ham. and Dayton, 2d Mort. 7 per ct.	85
Covington & Lexington, 10 p. r. et. Income	58
Indianapolis and Cincinnati D. dividend	70

STOCKS.

Bellefontaine and Indiana, 35.—Cin., Ham. and Dayton, 60.—Col. and Xenia, 87.—Cincinnati, 8.—Covington and Lexington, 14.—Dayton and Western, 17 1/2.—Eaton and Hamilton, 22.—Indiana Central, 50.—Indiansapo and Columbus, 60.—Little Miami, 93.—Mad. River & Lake Erie, 16.—Marietta and Cincinnati, 16 1/2.—Ohio and Mississippi, 7.—Hillsboro' and Cincinnati, 17.—Feru and Indianapolis, 17.

Marie & Kanz' Money Circular for the European Steamer of the 18th inst.

[TRANSLATED EXTRACT.]

NEW YORK, Monday, June 16th, 1856.

Since our advices of the 10th instant, up to Friday, our stock market has continued firm, but very inactive. The political news, received on Saturday, from England, were not looked upon as placing beyond doubt the amicable settlement of the difficulties between the two countries, and counteracted the influence of the favorable money and commercial news, which, under ordinary circumstances, would undoubtedly have caused our stocks to rise, while at present we have to report an almost general decline. European orders for our stocks have again been very trifling. State stocks—sold to a larger extent than for some weeks past, Missouri closing at a decline of 1/2, Virginias at 1/4 per cent.; the new California Loan, due 1875, has been offered as low as 78; we hear even some sales at 75. City and County bonds—business continues on the same limited scale as noticed for some time in our circulars. Railroad bonds—fair transactions. Erie 1875 bonds advanced 1/2; Erie 1883, 1/2; New York Central 6s, 1 1/2; and Illinois Central declined 1 1/2, and Erie 1871 Bonds, 1/4. Railroad Shares—Erie was the only active stock during the week; all the other stocks have been more or less quiet. Erie declined 1 1/2; New York Central, 1/2; Reading, 1 1/2; Michigan Central, 1/2; Michigan Southern, 1 1/2; Cleveland and Toledo, 1 1/2; Cleveland and Pittsburgh, 1; Galena and Chicago, 1 1/2; Chicago and Rock Island, 1/2; Cleveland, Columbus and Cincinnati sold at an advance of 1 1/2. Money—very abundant. Loans on call, 547. Discounts for first class paper, 547; for names less known, 849; stock contracts, 840. Exchanges—are active and have slightly advanced. London 109 1/2-110; Paris, 5.17 1/2 a 5.15.

MARIE & KANZ.

Extract from De Copper & Co.'s Money Circular for the European Steamer of the 18th inst.

[TRANSLATED.]

NEW YORK, Tuesday, June 16, 1856.

The aspect of our stock market has scarcely changed since our last advices of the 10th instant. As a natural consequence of a disposition to abstain from operating, money is tending towards greater abundance, especially for loans on call. The same cause noticed a week ago maintains a vague uneasiness in the public mind as regards our diplomatic relations with England, and continues to exercise its influence in reducing considerably the amount of business, which for speculation and railroad shares has been limited, and at declining rates. The effect has been but little felt upon State stocks and investment securities, in which some transactions have taken place, as well for European as for American account. State stocks—Missouri 6s have been active, closing at a decline of 1/4; Virginia 6s have been done to a limited amount at 1/2 per cent. decline, and Tennessee 6s at 1/4 advance. California 7s, redeemable in 1875, (new loan,) having been pressed for sale

few retail transactions in St. Louis 6s, Chicago 6s, and 7s, Detroit 7s, Milwaukee 7s, Wheeling 6s, (municipal); and in Peoria 7s; the latter at a reduction of price. Railroad Bonds—At the Stock Exchange the only transactions of some amount, have been in Erie 7s of 1875, at a rise of $\frac{1}{2}$ per cent.; and in Illinois Central Construction at a decline of $1\frac{1}{4}$ per cent. At private sale some Memphis and Charleston 1st Mortgage, and Michigan Southern and Indiana (Sinking Fund) have been done without material alteration in prices. Railroad shares—During the early part of the week, transactions were limited, with weakness in prices; to-day with more activity, the tendency downward. Money—Abundant from 5 $\frac{1}{2}$ per cent. on call, principally at 6 per cent. Paper, 7a. Exchanges—With moderate business, are looking up. London, 109 $\frac{1}{2}$ to 109 $\frac{3}{4}$. Paris 5.16 to 5.17.

DE COPPET & CO.

American Railroad Journal.

Saturday, June 21, 1856.

Cotton Trade of the United States.

The *National Intelligencer* has recently compiled a number of very interesting facts from the report of the Secretary of the Treasury, in relation to the exports and consumption of the above commodity. As to the tariff duties on raw cotton, we learn that in Great Britain, Sardinia, Belgium, Austria, Sweden, Holland, British North American Possessions, Denmark and Tuscany, it is admitted free; in France the duty, when carried in French or American vessels, is \$8.72, or in foreign vessels, \$6.48 per bale of 220 lbs.; in Spain, 79 $\frac{1}{2}$ cents in national, and \$1.85 in foreign vessels, per bale of 101 lbs.; in Mexico, \$1.50 for the same quantity; in Russia and Norway about $\frac{1}{2}$ cent. per lb. In Bremen and Hamb'g the duty is imposed *ad valorem*, the rate being $\frac{1}{3}$ of one per cent. in the former, and $\frac{1}{2}$ per cent. in the latter. In Naples and Sicily it is \$8.00 per bale of 192 lbs.; in Portugal, 2 1-5 cents per lb.; in the Papal States, 10 cents per lb.; and in Cuba, 19 $\frac{1}{2}$ per cent. in national, and 27 $\frac{1}{2}$ per cent. in foreign vessels.

The following statement shows the export of cotton for the United States, and the annual average of the same, for the three years ending June 30th, 1855:

Countries to which Exported.	Pounds of Cotton Exported From THE U. S. IN THE YEARS—	An. average amount of Cotton.	
		1853.	1854.
Great Britain..	766,596,498	606,247,047	673,498,259
France.....	189,226,918	144,428,880	210,118,809
Spain.....	36,561,042	35,024,074	38,071,795
Hanse Towns	22,671,782	37,719,922	30,809,991
Belgium.....	15,494,442	18,980,480	12,219,553
Austria.....	17,968,642	14,961,144	9,761,466
Sard. and Italy.	17,487,945	12,725,880	16,087,064
Russia.....	21,286,568	2,914,954	448,897
Mexico.....	7,463,851	12,146,080	9,044,866
Holland.....	7,638,994	6,048,165	7,527,079
Swed. and Nor.	6,099,517	8,212,710	4,941,414
Br. N. A. Pos.	12,205	72,790	8,428,487
Denmark	435,169	82,988	209,186
Cuba.....	87,691	250,633	9,920
Portugal.....	652,569	144,006	144,006
Elserviere.....	1,946,895	270,932	90,198
To all coun- tries.....	1,111,570,370	937,833,106	746,918

Of the annual average import of cotton into Great Britain for the last five years, (838,835,984 lbs.) more than three-fourths, or 661,529,220 lbs. were from this country. The value of this in 1855 was \$56,616,749. Of the above total receipts about one-sixth, or 122,810,688 lbs., were exported. In 1853, when the quantity exported reached 148,500,000 lbs., about 83,000,000 lbs. were from this country. As compared with East Indian, our cotton shows much less waste, their respective percentages of loss being 25 and 12 $\frac{1}{2}$. The fibre of American cotton is also superior to the other.

From the East Indies there are now annually exported about 165,000,000 lbs., to which an area of some 8,000 square miles of country is devoted.

Of the 2,857,338 bales of cotton admitted into the United Kingdom in 1852, 2,205,738 bales, or 93 $\frac{1}{4}$ per cent., were received at Liverpool, and of this four-fifths were for the factories of Lancashire and Yorkshire. The duty on cotton was taken off by Great Britain in 1845.

It is estimated that there are now over 20,000,000 spindles at work in the United Kingdom.

The export from this country for eleven months in the fiscal year of 1856, is put at 2,755,000 bales.

Of the British West Indian cotton product, a largely increased amount is annually sent to this country; while the exports to the Mother country are diminishing. From 1851 to 1855, the former had risen from 29,353 lbs. to 1,880,207; while the latter had decreased from 446,529 lbs. to 344,069 lbs. The following figures show the average prices of cotton in this country and Great Britain, for the last five years:

In the United States. In Great Britain.

	Cents.	Cents.
1851.....	12.11	12.1-4
1852.....	8.05	11.1-4
1853.....	9.85	12.4-7
1854.....	9.47	12.3-4
1855.....	8.74	12.1-5

Cotton constitutes in value more than two-thirds the exports of this country to France. The French Government has been making strenuous efforts for the introduction of this plant into Algeria. Havre is the great French port of entry for cotton, whence it is forwarded by railroad to all parts of the country and to Switzerland. Next to the United States, France derives her cotton from the Levant and South America.

By a glance at the table of exports, it will be seen to what an extent the Russian demand decreased, on account of the war. Before its commencement there were in that country 850,000 spindles at work, producing annually 10,800,000 lbs. of cotton yarns. Much of this was made into cotton velvet and exported to China, where it was supplanting the English manufacture. The repeal of the Russian duty on cotton would be highly advantageous to her manufacturing interests; and it is believed that such a result will shortly take place. The number of cotton factories in that country, previous to the war, was 456, employing 112,427 operatives, and producing annually 40,927,726 lbs. of yarn.

Detroit and Milwaukee Railroad.

The Corunna *Democrat* states that track laying on this road is progressing rapidly, and that within a few days it is expected to have the line completed to that place. Corunna is the county town of Shiawassee county, and, from a

glance at the map, we should judge is about 75 or 80 miles distant from Detroit.

Lowmoor Iron--Forged Stamp.

We have received a communication from the American agents of this celebrated iron (Wm. Bailey Lang & Co.) stating that some manufacturers in this country have been making an inferior quality of iron, and branding it *Lowmoor*. The agents have consequently, it is stated, been obliged to commence suits against the parties. In most of the States the forging of manufacturers' brands is punishable as a criminal offence.

North Missouri Railroad.

The Directors' report for the year ending 31st of March, 1856, read to the stockholders at their late meeting, states that when the Board entered upon their duties, in April, 1855, there had been expended for grading, bridging, superstructure, fencing, rolling stock, discount, &c., the sum of \$556,066. During the past year, there has been added to the above \$1,268,280, making the total expenditure to date \$1,824,846. Of this sum, \$723,724 have been paid for the various items on the first division, 19 $\frac{1}{4}$ miles long. The Chief Engineer estimates that \$107,260 more will be required to complete it, to which if there be added \$16,422 in arbitration, will bring the aggregate cost to \$847,406, or \$62,732 beyond the original estimates. This increase, however, has been mainly caused by the substitution of stone for sand ballast, and the allowance of additional superstructure. By deducting these last two items the excess would be reduced to \$22,084. Up to the 31st of March, there had been expended on the second division (from St. Charles to the junction with the Hannibal and St. Joseph Railroad) the sum of \$577,546.

In their last report it was stated to be the policy of the Board to concentrate their operations as far as possible, on certain parts of the line, and avoid squandering their means by commencing work at too many points. Since then a different course has been adopted. The contract for grading requires the work to be completed to the junction by September next, and the Board were unwilling to give the contractors any excuse for the non-fulfilment of their agreement by the time specified. It was also considered that the present course would more readily enlist the exertions of the Legislature and the people along the line on behalf of the work. The first division (from St. Louis to the Missouri, at St. Charles) was to have been completed in May last year, but could not be opened till September. It is not believed that the second can be put in running order by the time specified. The work will be pushed forward as rapidly as the company's means will permit.—It is hoped that during the summer the work of track-laying will be commenced, and continued without interruption till it is completed to the Hannibal and St. Joseph line. Three thousand tons of rails have been purchased, and are now at New Orleans. These will be delivered at St. Charles at an early day. Nothing is wanting to purchase the balance of the rails but a favorable market for the sale of State bonds.

By the estimate of the company's former Chief Engineer, the cost of construction to the end of the second division will be \$4,928,776, exclusive of \$984,838 for engineering, machine-shops, land-

damages, and rolling stock, which are estimated at \$984,838 additional. The present estimate is \$6,812,508 for all purposes, towards which the following resources are available:

St. Louis City	\$500,000
St. Louis County	500,000
Individual subscription in St. Louis Co.	117,800
St. Charles Co., and individual subscriptions	100,000
Warren "	59,600
Montgomery "	65,300
Boone "	127,300
Audrain "	62,400
Randolph "	164,400
Individual subscriptions in Macon Co...	8,300
do do in Monroe "	300
do do in Calloway	4,100
Stock subscribed by contractors	300,000
Estimated amount of the bonds of the Company which the contractors will have to take	350,000
To the foregoing may be added the credit originally granted to the State	2,000,000
Also, the unconditional credit of the State granted at the last session of the Legislature to purchase iron and rolling stock for second division	1,000,000

Total means \$5,359,500

The subscriptions made by Schuyler and Adair counties of \$50,000 each, are not to be called in until the work is put under contract north of the Hannibal and St. Joseph road.

The above shows a deficit of means to the am't of \$653,008, besides interest and discount on State and City bonds, which will materially increase the deficiency. The last payments of county subscriptions will not fall due before the beginning of 1858. It is hoped, however, that arrangements can be made for anticipating these; and that the State and the counties along the line will not see the undertaking fail for the want of resources thus deferred.

At the last session of the Legislature an act was passed, granting a loan of \$1,000,000 in State bonds to the company, for the purchase of iron and rolling stock, between St. Charles and the H. & St. J. line. A further grant of \$1,000,000 was made, to be applied in like manner north of that line. The latter was made conditional on an actual expenditure being made by the company, and not creating a lien on the road, of one dollar for every two to be obtained from the State. This still leaves them minus by the sum of \$3,695,897, for completing the road to the Iowa State line. No effort should be spared to secure this at the earliest day possible.

In the ensuing six months it is hoped that the company's title to lands over which the line will pass, will be perfected as far as the junction. Much complaint is made at the illiberality of land owners on the line, particularly in the vicinity of St. Louis and St. Charles, for the purpose of wrenching the last cent out of the treasury.

Applications have been made to several counties for increased subscriptions, and to some counties which have not yet subscribed. It is hoped the results will be satisfactory.

On the 17th day of August, 1855, the Directory agreed to receive from the contractors, that portion of the road from St. Louis to St. Charles, although the roadway was not thoroughly completed. From that time until the beginning of winter, two trains each way were run daily. During the winter, one train each way, per diem, was deemed sufficient. We refer you to the report of the Treasurer, which exhibits the receipts and expen-

ditures, in operating this portion of the road, from the day of opening to the 1st of April, 1856.

We deem it hardly necessary to repeat to you the opinion expressed by our predecessors, that beyond all reasonable doubt, this will be a dividend paying road, when completed to the Iowa State line. Nor need we refer you to the estimate in their last annual report, by which that opinion was amply sustained. The people of St. Louis especially, must be aware that to the business interests of their city, it is the most important road now being constructed in the State. It is to develop and secure a trade from Iowa and the northern portion of this State, which, without this road, would unquestionably find a market elsewhere. Nor is it of less importance that this road should be ready to operate as far as the Hannibal and St. Joseph railroad by the time that work is finished, and that then our work should be pushed on as rapidly as possible to the Northern State line. We trust that those whom you may select to be our successors in directing the affairs of the Company, will be earnestly and heartily seconded in their efforts by all whose interest it is that this great work shall be speedily accomplished. Stockholders expect of Directors a faithful and efficient discharge of duty as such. The latter receive no salary or other emolument for their services, and are often compelled to use their individual credit, and to sacrifice much valuable time for the interests of their enterprise. It is but just that they ask of stockholders, in turn, a ready and zealous co-operation in supplying them with the means necessary to render their labor effectual.

Iron Mountain Railroad.

Two miles of the track on this road are already laid. From its general appearance the road bids fair to be one of the most substantial structures in the West. The road is thoroughly ballasted, and the rails laid in alternate joints. A St. Louis contemporary mentions an improved chair which has recently been patented by the Chief Engineer, and is to be used on this line.

Morris and Essex Railroad.

The annual meeting of stockholders of this company was held in Newark, on the 11th inst., Judge Ephraim Marsh acting as Chairman. From the annual report read we learn that the company's business, for the year ending 31st May, was— Gross receipts \$229,341 33 Working expenses 133,073 51

Net gains	\$96,267 82
Less interest on debt	24,584 06
	\$71,683 76

Two semi-annual dividends, amounting to \$77,454 94, were paid during the year.

The equipment of the road consists of ten locomotive engines; 16 passenger cars; 62 freight and cattle cars, and 20 baggage, gravel, and hand cars.

In accordance with a resolution of the last meeting, the Directors have procured a survey from Hackettstown to the Delaware river, with an estimate of the cost of constructing the extension. The route follows the eastern slope of the Pohatcong Valley 7 miles, thence passing north of Stewartsville, into Lopetcong Valley, and thence to the Delaware, near Cooper & Hewitt's Furnaces at Philipsburg—26½ miles from Hackettstown. The route is represented as very favorable; the grades easy and curvatures light.

The cost is estimated to be \$540,889 00—including rolling stock for five years.

The propriety of completing this extension is urged as beyond question, and is considered a matter of time.

The Board of Inspectors then reported the result of the election for Directors for the ensuing year, as follows: Wm. Wright, Joel W. Condit, Beach Vanderpool, Wm. N. Wood, Jeremiah C. Garthwaite, Daniel Babbit, Alexander Robertson, Jonathan Parkhurst, John C. Bayley.

Imports of Iron.

A table, showing the various kinds and quantities of iron imported into this country for the five years ending 30th of June, 1855, has recently been published. It appears that the total import for the several years in that period were—

Year.	Tons.	Value.
1851	374,027	\$10,204,100
1852	457,190	11,919,625
1853	558,466	17,276,326
1854	548,480	17,262,583
1855	386,652	13,950,941

Of the above quantities we find that the single item of railroad iron amounted to over 50 per cent. annually. In 1855, common bar iron (manufactured by rolling) formed 30 per cent., and pig iron fully 25 per cent. of the entire receipt from abroad.

The import of steel was—

Year.	Tons.	Value.
1851	8,063	\$1,570,068
1852	9,276	1,708,599
1853	16,267	2,970,313
1854	13,632	2,477,709
1855	18,389	2,598,137

The imports and values of manufactures of steel and of iron and steel were—

Year.	Tons.	Value.
1851	11,392	\$7,150,486
1852	11,564	6,988,370
1853	13,298	7,979,119
1854	15,182	9,979,182
1855	13,388	8,029,787

The sum of the above shows the following grand result for five years—

	Tons.	Value.
Iron	2,324,814	\$70,618,585
Manufactures of Iron, and Iron and Steel	65,309	39,185,944
Steel	60,621	11,314,821

2,450,744 \$121,114,850

The average price of iron, during that period, was \$30.88 per ton; of steel, \$186.64; and of manufactured goods, about \$600.00 per ton.

Delaware, Lackawanna, and Western Railroad.

A contract has been made between the managers of this road and the Lackawanna Coal Company, for 20 years, to convey their coal from Greenville, to Elizabethport, N. J., at a fixed rate of freight—150,000 tons per annum for the next two or three years, and then 300,000 tons per annum thereafter. It is calculated to send to market before January, 1857, 100,000 tons of coal. More than 20,000 tons are now stacked at the mines and ready to come forward to New York.

Schenectady Locomotive Works.

The Albany Evening Journal states that two engines built at these works for the Great Western Railroad (Ca.), have performed the following amounts of work, since the 1st of August, 1854—

The "Welland" has run, from the above date to 19th May, 1856, 57,055 miles.

The "St. Catherines", during the same period, has made 53,150 miles.

The first is an average of above 100 miles a day for over a year and three quarters. We believe it will be pretty hard to beat that.

Iron Bridge.

The Chicago *Press* states that an iron bridge is to be built in Chicago, at Rush street. It will cost \$48,000, \$30,000 of which will be paid by the Galena and Chicago, and the Illinois Central Railroad Companies. The posts will be of cast iron, but the balance of the bridge will be of the very best quality of wrought iron. The whole of the work will be done in that city.

Reading and Lehigh Railroad.

This is the name of a new line, 34 miles long, which has been recently chartered. The surveys were made by M. E. Lyons Esq., and a report of these has just been published. The road, when completed, is to form the last link in the great chain composing the middle route from New York to the West and North-West. The line as surveyed commences in Reading, Pa., from which point turning to the North by a curve of 730 ft. radius, and crossing the Philadelphia and Reading railroad, it proceeds for some distance along the base of South Mountain. At 8½ miles from Reading, it attains to the summit level. Its highest point is 480 feet above tide-water, or 280 feet above the starting point. About one mile east of Allentown, it connects with the Lehigh Valley railroad. The following characteristics of the work are given in the report:

Length of road, 34 miles, 9½ of which are curved.

Total ascent eastward, 356 feet.

Do. westward, 363 feet.

Maximum grade eastward, 34 feet per mile; but susceptible of being reduced to 26½ feet, by an additional expenditure of \$40,000.

Maximum grade westward, 37 feet per mile.

There are 3½ miles of the 34 feet grade, and 3½ miles of the 37 feet grade.

Seven miles are level; 10 miles under 20 feet per mile; and the remaining grades vary from 20 to 28 feet per mile.

Total curvature, 280 degrees to the south, and 260 to the north.

With the exception of two short curves at the termini, the curves have radii of not less than one mile.

The country traversed is well known to be one of the most fertile and productive sections on the continent, being similar in formation and character to the Tennessee, Virginia, and Cumberland valleys, and extending the entire length of the Alleghany mountains. Along the route there are also inexhaustible beds of lime-stone and iron ore. Numerous furnaces are already at work in Reading and other places. The ore when mixed with what is called the "red short ore," produces the best quality of pig iron. Numerous lateral coal roads are already in operation, all of which would become more or less tributary to the line.

Its connections for through business are most important. With the Lehigh Valley and New Jersey Central roads, a line will at once be opened to the city of New York. At Reading a connection is made, through the Lebanon Valley road, with the city of Harrisburgh. The total distance between New York and Harrisburgh, by these lines, would be 178 miles; or between New York and Pittsburgh, 425 miles, without any change of gauge. It is claimed that in the matters of distance and cost, as well as graduation, curvature, and connections, this route will be more advan-

tageous than the Port Clinton and Allentown, chartered in 1853. The city of Reading is already the third in the State, containing over 20,000 inhabitants.

We annex estimates of cost as follows:

Grading, masonry, &c.	\$534,040
Superstructure.	290,000
Stations, switches, &c.	30,000
Engineering and contingencies.	75,000
Land damages, say.	50,000

Total. \$1,079,040

Books were opened to receive subscriptions, on the 19th ult. The company were to be organized by the election of officers, on the 16th inst., in the city of Reading.

Little Miami Railroad.

The gross earnings of this road, with the Columbus & Xenia railroad, for the six months ending 31st of May were. \$504,462 Working expenses. 284,727

Net earnings. \$269,735

Less interest and taxes. 59,000

\$210,735

Dividend received from the Columbus & Xenia R. R. 25,302

Net profits. \$236,037

Divided as follows—

To the Columbus & Xenia R. R. Co. \$73,679

" Little Miami " 157,358

From the net profits a dividend of five per cent, payable in Co.'s bonds at par, has been declared.

Maryland and Delaware Railroad.

We have received a copy of the first report of this company, containing their charter, with Engineer's report, estimates, &c. The company are authorized to build a railroad from Easton, or any other point in Talbot county, Md., to the Delaware State line, there to connect with the Delaware railroad, authorized by the Legislature of that State. Other provisions are liberal, no limits being imposed as to rates of toll or dividends. The surveys were commenced in September last under the superintendence of Mr. Chas. P. Manning. Three different lines have been located, the respective lengths of which are 37.7, 36.7, and 36 miles. Mr. Manning having been obliged to resign his post, owing to his connection with the Board of Public Works in Virginia, the services of Col. Walter Gwynn have since been obtained. In October a proposition was received for grading the road, and after some delay accepted by the company—the contract to take effect only when sufficient stock has been subscribed to pay for the grading.

Meetings have recently been held at several points along the line, to secure the necessary stock subscriptions. A good feeling towards the undertaking is said to be generally manifested. Its prospects are believed to be much better than they were a year ago.

The cost of the work is estimated at \$12,000 per mile. As this is an unusually low figure, it should be borne in mind that there will be little or no bridging necessary and no very heavy cuttings. The steepest grades need not exceed 20 ft. per mile, and the curvature will be equally favorable.

The total receipts to date have been \$1,995; expenses, \$2,095.

Gen. T. Tilghman is President, and J. P. Manlove, Treasurer. The Company's office is at Easton, Md.

Missouri State Bonds.

The State Treasurer has given notice that he is prepared, and will pay all coupons on Missouri State Bonds, issued for railroad and other purposes, on the 1st of July, at the Bank of Commerce, in New York. This, we presume, will satisfy bondholders of the security of their investment, and ought to appreciate these bonds in the money market.

Pittsburg and Connellsburg Railroad.

In June, 1853, an ordinance was passed by the Common Council of the City of Baltimore, guaranteeing the above named company's bonds to the extent of \$1,000,000. This method of granting assistance was changed, on Saturday last, to one substituting for the guarantee, city bonds to an equal amount. The bonds authorized to be issued under the ordinance are to be done in such manner as shall seem most conducive to the early completion of the road, in sums of five hundred and one thousand dollars, to amount of one million of dollars in the aggregate, to be payable on the first day of January, 1886, bearing six per cent interest per annum, payable semi-annually, on the first day of January and July, in each year, and upon the surrender to the Register, from time to time, for cancellation, of any amount of the bonds of the said Pittsburg and Connellsburg Railroad Company, heretofore guaranteed by the city of Baltimore. The bonds to be sold by the Commissioners of Finance, and the proceeds to be disbursed by them in the discharge of the debts and contracts of the road, upon the order of the President and Directors of the road, when the Commissioners of Finance are satisfied that the orders are given for the legitimate expenditure of the road, and for redeeming from hypothecation the bonds of the Company guaranteed by the city of Baltimore.

Before the exchange of bonds shall take place to any extent whatever, the Pittsburg and Connellsburg Railroad Company is to execute to the city of Baltimore, a deed, the form of which shall be approved by the Counsellor to the city, recognizing and confirming all the provisions and conditions of the ordinance approved June 24th, 1853, except as modified by this ordinance, and covenanting for, and securing the payment by the Railroad Company of the interest and principal of the bonds, as they shall respectively become payable, and making the mortgage now held by the city of Baltimore, applicable to secure the interest and principal of the bonds of the city directed to be issued.

The ordinance also enacts that whenever the Commissioners of Finance shall be satisfied that the railroad company can borrow from other sources the whole sum necessary to complete and equip the whole line of said road from Cumberland to Pittsburg, after the expenditure of the means now possessed, or which may hereafter be acquired, by the company, upon the security of a first mortgage upon the property of said company, the Commissioners of Finance are to certify the same to the Mayor of the city of Baltimore, and the Mayor is authorized to execute to the lenders of the money, a deed giving priority to the mort-

gage to the lenders of said money, over the mortgage to the city of Baltimore.

The ordinance is not to go into effect until the provisions and conditions thereof shall be accepted by the Pittsburg and Connellsburg Railroad Company.

Southern Railroad Association.

This Association, composed of the officers of all the Southern railroads, has been convened by its President, R. R. Cuyler, Esq., of Savannah, to meet at Asbland, (Savannah) on Tuesday, 8th July next.

The objects of the meeting are to regulate the business relations of the Southern roads, and combine them in one complete system.

As the Association is composed of intelligent gentlemen engaged in the consistent support of Southern interests, we may expect from their meetings something more than a mere arrangement of freights, fares, gauges and schedules.

We may expect a development of railroad commerce, and the recommendation of a concerted plan of Southern improvements worthy of consideration and adopted by the Legislatures of Southern States. Reciprocally interested, as all railroads in the same section must be, we may expect that the stronger shall aid the weaker, at least by recommendation to capitalists and commercial cities.

The Richmond and Danville railroad should be extended to a connection with the Georgia roads. The Virginia and Tennessee road should extend its aid and countenance to the incomplete section of the Great Southwestern railroad, terminating for the present at Memphis, but destined to be connected with Mobile, Savannah, and New Orleans. The Central road should be pushed into Kentucky and into Southern Ohio.

But, above all, the Association should recommend to the Southern States the connection of a common trunk, by way of El Paso, to the Pacific Ocean. This important work will develop a home market, a field of internal commerce, and a current of travel intercourse, in which every part of the South will participate.

It is not, however, for us, to trace the physical or political consequences which will follow its completion. We would, however, remind our fellow citizens, that as the immediate vicinity of our city has been selected as the place for holding this Convention, it will afford an excellent opportunity for impressing upon it the common interest of the Southern cities, as well as for displaying their proverbial hospitality towards the intelligent gentlemen who are expected to assemble.—*Richmond Dispatch.*

The Peoria and Oquawka Railroad.

The following is a condensed statement of the condition of this new enterprise. Messrs. Kellogg, Moss & Co., Contractors and Lessees. Western division completed and in operation. Operated temporarily by the Central Military Tract Railroad Company—43 miles long, from Galesburg to Burlington.

Middle Division—In process of construction, work two-thirds done and iron purchased and on the way. Will commence laying rails in two weeks. This division will be completed in August next. Extends from Elmwood to Galesburg, 25 miles.

Eastern Division—Completed and operated by the lessees; extends from Peoria to Elmwood, 28 miles. During the months of March and April, 1856, the business on this division has been as follows, one train each way, daily, carrying freight and passengers:

Number of passengers carried.....	4,256
Do. bushels grain	66,580
Do. do. coal	42,600
Do. tons up freight.....	606
Do. shingles and pickets	58,000
Do. feet lumber.....	162,000

The Eastern Extension is now open to Crugers station, 18 miles. One thousand tons of iron are

on hand, and the balance to lay the track to Peoria Junction is on the way from New Orleans. This road intersects the Illinois Central Railroad half-way between Kappa and Panola station, which point it will reach by August, and Peoria Junction by November.

Reading Railroad.

We give below a statement of the business of the Reading railroad for the month of May, and the five preceding months of the fiscal year, compared with the business and receipts for the corresponding time last year, as follows:

	1856.	1855.
Received from coal.....\$289,194 48	\$387,897 33	
Received from merchandise.....31,600 61	28,488 16	
Received from travel, &c.....27,717 18	33,208 55	
Total.....\$349,512 27	\$449,694 03	
Transportation, roadway, dumpage, Renewal Fund, & all charges.....172,479 64	184,424 90	
Net profit for the month.....\$176,032 63	\$265,269 18	
Net profit for previous 5 months.....489,867 05	711,817 87	
Total net profit for 6 months.....\$665,899 68	\$977,086 50	

The receipts from travel and coal have fallen off largely, while the receipts from merchandise have increased.

Genesee Valley Railroad Company.

The election for Directors of the Genesee Valley Railroad Company was held in Rochester, on the 12th inst. The following gentlemen were elected by the Common Council to represent the city, viz:—Samuel G. Andrews, John Fowler, Andrew J. Brackett, and Johnson I. Robins.

The stockholders elected the following gentlemen:—Jas. S. Wadsworth, Daniel H. Fitzhugh, John R. Murray, Freeman Clark, Levi A. Ward, Isaac Hills, James Chappell, Lewis Selye, Lyman Munger.

Inspectors—Charles M. Lee, Isaac R. Elwood, James L. Angle.

The Board subsequently chose the following officers and committees:—

President—James S. Wadsworth, Genesee.

Vice President—James Chappell, Rochester.

Secretary and Treasurer—Isaac Hills.

Executive Committee—James Chappell, Lewis Selye, John Fowler.

Finance Committee—Levi A. Ward, D. H. Fitzhugh, J. I. Robins.

Lexington and Big Sandy Railroad.

We learn that the 4 ft. 8½ in. gauge has been adopted for this road, similar to that between Louisville and Lexington. This will give a uniform gauge across that part of the State between Louisville and the Virginia line, at the mouth of Big Sandy river. If the people of Cincinnati do not bestir themselves, and secure a five foot gauge from Lexington to Danville, they will feel the effects of the above step in the withdrawal of trade from their city, to an extent that they hardly dream of.

Central Ohio Railroad Bonds.

The Wheeling *Gazette* states that the secretary of the Central Ohio Railroad is now busily engaged in issuing bonds to the creditors in lieu of their claims. These bonds are made payable in

twenty years, and bear interest of seven per cent. payable semi-annually. The creditors, it is stated, go into the matter with cheerfulness. The road is said to be doing well, and is well managed.

Pacific (Mo.) Railroad.

We observe that EDWARD MILLER Esq. of Philadelphia has been chosen Chief Engineer of the above road by the new Board of Directors. Mr. Miller has accordingly resigned his connection with the North Pennsylvania road. He will be succeeded by SOLOMON W. ROBERTS Esq. of Pittsburgh. The latter gentleman has acted for seven years as the Chief Engineer of the Ohio & Pennsylvania railroad; but as this work is now nearly completed, he has entered the service of the North Pennsylvania Railroad Company, as their Chief Engineer and General Superintendent.

A railroad has been projected to extend from Reading northwards to connect the Lebanon Valley Railroad with the Lehigh Valley road and the New Jersey Central. This will prove a rival road to the proposed Allentown railroad, which is to connect the Dauphin and Susquehanna railroad with the Lehigh Valley railroad. The projected road we allude to is the Reading and Lehigh railroad, for which a company has been organized. One of these two projected roads is necessary to perfect what is called the Great Middle route between the West and South-west. Charters have been obtained for both the Allentown railroad and the Reading and Lehigh railroad.—*Exchange.*

North Missouri Railroad.

We understand that the contract for the building of the North Missouri Railroad to the junction with the Hannibal and St. Joseph road, has been, by consent of the parties, cancelled. This arrangement will not, in any way, interfere with the progress of the work on the road. It will go on as usual.—*Republican.*

Iowa.

Stringent railway laws have become customary low everywhere, in consequence of the numerous disastrous occurrences on many of the leading roads; but an enactment of this kind has just been passed by the Legislature of Iowa, which is rather more severe than any other of recent date. It provides that trains shall come to a full stop on approaching crossings, under a penalty of \$500 for non-observance, half of which sum goes to the informer. And in case that life or property should be destroyed by violation of the act, the penalty is double the value of the property so destroyed, and for every life lost, from \$10,000 to \$60,000 is to be recovered by the representatives of the deceased, and to go to the widow and children, if there be any, or if there be not, then to the heirs of the deceased.

We clip the above from an exchange. If there is any truth in the statement, it seems to us these Solons ought to go a little further. They ought to have the trains—locomotives and all—drawn by horses, which should never be allowed to proceed faster than five miles an hour. A full stop should also be made at every joint in the rails; and a scarecrow placed every hundred yards to keep the birds from lighting on the track. Prudence would also suggest several other precautionary measures, as, for example, that passengers should get out of the cars, and cross all bridges on foot. But we cannot think that in the year of grace 1856, of American Independence 79, and of the locomotive 28, such old fogeyism in railroad matters can be found in Iowa.

Production of Sugar.

A writer in the *Herald* gives the following statistics as to the amounts of sugar produced and consumed in the world.

Production.

	Partly Estimated.	1854.	1855.	1856.
Cuba, (tons)....	358,000	380,000	400,000	
Porto Rico.....	48,700	40,000	50,000	
Brazil.....	80,000	95,000	100,000	
Louisiana.....	221,000	173,000	125,000	
French colonies..	81,400	85,000	85,000	
Dutch and Danish West Indies....	18,000	18,000	18,000	
Br. West Indies..	172,200	170,000	175,000	
Br. East Indies..	39,300	37,000	39,000	
Mauritius.....	82,300	63,000	80,000	
Java.....	100,000	85,000	80,000	
Manila, Siam and China.....	30,000	30,000	35,000	
Beet root—France, Belgium, Zollverein, Russia and Austria....	184,000	148,000	170,000	
Total.....	1,414,900	1,324,000	1,357,000	

The crop of Cuba in 1855 was 1,900,000 boxes, and calculating five boxes to the ton, 380,000 tons. For 1856 it was estimated that it would exceed the last by ten per cent.; it is now found that it will hardly exceed that, and by some it is computed at ten per cent. less, but we may put it at 400,000 tons.

Consumption for 1856.

Great Britain (tons).....	418,000
United States.....	380,000
Continent of Europe.....	265,000
Including beet root.....	148,000
	418,000
Canada and Provinces.....	20,000
Portugal.....	10,000
Sweden and Denmark.....	9,000
Mexico and South America.....	16,000
Spain.....	70,000
Russia.....	15,000
Cuba and all sugar producing countries not mentioned.....	30,000
Total.....	1,381,000
Estimated production of 1856.....	1,357,000

Hempfield Railroad.

The laying of the track on the Hempfield railroad has been completed as far as Triadelphia. It is the intention of the company to run a daily train between that place and Wheeling as soon as the cars can be had. The trains will connect with the Washington and Pittsb'g coach at Triadelphia. As soon as the spring opens, the work on the remainder of the road, from Washington to Philadelphia, will be completed as fast as possible.

Grand Junction Railroad.

The annual meeting of the Grand Junction railroad company was held on Friday afternoon. The annual report of the Directors was read, which shows, it was stated, a favorable result. It was announced that Mr. S. S. Lewis had gone to England in order to make an arrangement with the Grand Trunk railroad, by which they would take a half million of their stock and make use of their railroad and deep water accommodations at East Boston for the reception of their Canada goods to and from Europe. The meeting, without choosing Directors, adjourned for sixty days, in order to ascertain the success of this mission.

New York and New Haven Railroad.

By the record of decisions in the Court of Appeals, it will be seen that the judgment of the Superior Court of New York, in the case of the Mechanics' Bank against the New Haven Railroad Co., has been reversed, and the case sent back to the Court below for a new trial. The points of the decision have not been received yet in this city, but the Albany Argus, of the 17th, states, on what it deems reliable authority, that the decision goes

the full length of holding that the company is not liable in any form for the spurious stock issued by Mr. Schuyler. The amount immediately involved, we believe is only about \$25,000, but the decision affects property to the amount of about two millions.—*Com. Advertiser.*

Memphis and Clarksville Railroad.

The following gentlemen were chosen Directors at the recent annual meeting:

W. B. Munford, Dr. J. Cobb, G. Stacker, R. M. House, W. M. Stewart, G. H. Warfield, J. C. Johnson, Joshua Elder, Wm. Broaddus, W. P. Hume, J. G. McKoin, Larkin Bradley, Alfred Robb, W. A. Quarles and W. A. Forbes. The only change made in the Board is the substitution of Alfred Robb for Hugh Dunlap, and the filling of two vacancies with William A. Quarles and William A. Forbes.

The stockholders, by a large vote, left the selection of the route to the Directors.

Railroad Earnings.**OHIO & PENNSYLVANIA R. R.**

The following is a statement of the receipts of this road:

Passenger receipts for May.....	\$60,291.03
Freight receipts for May.....	26,607.09

Receipts for May, 1855.....	\$86,898.12
Decrease.....	\$1,888.34

Operating expenses for May.....	\$41,009.80
Amount expended on construction.....	3,740.28

Total.....	\$44,750.03
ILLINOIS CENTRAL R. R.	

The receipts of the Illinois Central Railroad for May were.....

May 1855.....	\$214,600
Increase.....	\$93,200

or over 75 per cent. in 1856. The receipts for June will also be large.

NORWICH & WORCESTER R. R.

The receipts of the Norwich and Worcester road for May were.....

May 1855.....	\$29,592
Increase in 1856.....	\$1,650

CATAWISSA, WILLIAMSPORT & ERIE R. R.	
Earnings for May, 1856—	

Passengers.....	\$10,378.84
Freight, &c.....	12,800.97

Total.....	\$23,179.81
May, 1855.....	20,748.67

Increase.....	\$2,131.14
INDIANA CENTRAL R. R.	

The receipts of this road for May were—

Passengers.....	\$25,896.02
Freight.....	9,100.16

Mails, &c.....	1,561.09
Total.....	\$36,547.21

May 1855.....	27,111.28
Increase.....	\$9,495.93

PENNSYLVANIA CENTRAL R. R.	
Receipts for May, 1856.....	\$453,586.25

" " 1855.....	325,711.94
Increase.....	\$127,874.31

Receipts from Jan. 1, 1856, to June 1, 1856.....	\$2,181,295.61
Same period last year.....	1,548,285.58

Increase.....	\$683,010.83
— or a little over 40 per cent.	

MILWAUKEE & CHICAGO R. R.	\$10,917.37
The receipts of the Chicago and Milwaukee Railroad for April were—	
Passengers.....	\$22,091.42
Freight	9,691.11
Total	\$31,782.53

N. Y. & HARLEM R. R.	\$10,917.37
The receipts of the New York and Harlem Railroad Company have been:—	
May 1855.....	\$82,988.64
May 1856.....	90,961.95
Increase.....	\$8,003.31

MILWAUKEE & MISSISSIPPI R. R.	\$10,917.37
The earnings of this road were for	
May, 1856.....	\$61,661.44
May, 1855.....	66,944.16
Decrease.....	\$5,282.72

The decrease was expected to be still greater, having arisen from the lateness of opening the Erie canal this spring. Twenty-two additional miles of this road, completing it to Maromaniac, were to be opened this week.

INDIANAPOLIS & CINCINNATI R. R.	\$10,917.37
The earnings of this road for the month of May were—	
Passengers	\$20,724.03
Freight	17,968.12
Mail	75.028
Express.....	675.00

May, 1855.....	\$40,014.23
Increase (nearly 80 per cent.).....	\$9,129.21
MORRIS CANAL.	
The receipts of the Morris canal have been:	
Total to June 9, 1856.....	\$69,782.19
Week ending June 16, '56.....	8,456.58
Total to June 7, '56.....	\$64,690.22
Week ending June 14, 56. 12,921.75	\$77,611.97

Decrease in 1856.....	\$262.80
GREAT WESTERN (CA.) R. R.	
Earnings for the four weeks ending June 13th:	

Passengers	\$140,241.29
Freight	55,385.47
Mails, &c.	7,490.76
Total	\$203,067.52

Same time last year.....	151,322.41
Increase, 33 per cent.....	\$51,745.11

The total receipts since 1st of Feb'y, have been \$1,100,287.02, against \$780,330.61 for the corresponding period in 1855.

CLEVELAND & PITTSBURG R. R.	\$10,917.37
The receipts of the Cleveland and Pittsburgh railroad for May were	\$63,739.66
May, 1855.....	55,388.81
Increase.....	\$7,900.85

CLEVELAND, COLUMBUS, & CINCINNATI R. R.	\$10,917.37
Earnings for May—	
Passengers	\$45,547.64
Freight, &c.	68,855.02

May, 1855.....	\$114,402.66

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**Lawrence Scientific School,
HARVARD UNIVERSITY,
CAMBRIDGE.**

THE next term will open on the 28th day of August, 1856.
For circular containing particulars address
6125 M. N. HORSFORD, Dean of the Faculty.

PATERSON, NEW JERSEY, June 16th, 1856.
NOTICE.—The Copartnership of ROGERS, KETCHUM & GROSVENOR is dissolved by the decease of THOMAS ROGERS. Either of the undersigned will use the name of the firm in liquidation.

The business of manufacturing Locomotive Engines and other machinery will be continued by "The Rogers Locomotive and Machine Works," under a charter granted by the Legislature of New Jersey.

MORRIS KETCHUM.
J. GROSVENOR.

**First Class Locomotive
FOR SALE AT A GREAT BARGAIN.**

THE Engine is inside connected—4 ft. 8½ in. gauge—5½ ft. drivers—cylinders 14½ by 20 in. stroke. Independent cut off valve motion. Copper flues and fire sheets. Weight 20 tons. The above engine is nearly new, in fine condition, and in every respect a FIRST CLASS PASSENGER ENGINE.

For particulars address
ELLIOTT & BOWLES,
118 William st., N. Y.

Also a second hand Engine of smaller capacity, for sale as above.

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RAILROAD IRON EXPRESS,
NEW YORK AGENTS,**
DAVIS & KASSON, 24 BROADWAY,

HAVING completed very favorable arrangements, via the Canals, Lakes, and Railroads for the shipment, exclusively, of RAILROAD IRON. We are now prepared to contract for the delivery of any amount from New York to points West and South-West. Confident that our facilities are unequalled, we respectfully solicit your shipments.

W. M. KASSON & SON.

N.B.—This Express being devoted exclusively to the shipment of RAILROAD IRON, affords a guarantee of rapid transit and no delay.

INSURANCE at low rates of premium, will be effected when desired.

ELLIOTT & BOWLES,
(LATE ELLIOTT & CO.)
Railroad Commission Merchants, and Agents for the Sale of
FIRTH'S METAL,
The Cheapest and Best Metal for Rail Road Journal Boxes.
118 WILLIAM STREET, N. YORK.

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& COMMISSION MERCHANTS,
Locomotives,**
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PASSENGER and FREIGHT CARS, RAILROAD IRON, CHAIRS, SPIKES, and all other supplies in use by railroads. Also negotiate the Sale of Bonds, and the Exchange of Bonds for Rolling Stock, Iron, etc. Sole Agents in New York, for KASSON & Son's Locomotive Express and Railroad Iron Express, enabling them to transport Locomotives, Cars, and Railroad Iron, on the most favorable terms.

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JOHN WILKINSON Esq., Pres't M. S. & N. I. R.R., Toledo, O.

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Chicago, Ill.

JOHN CATLIN Esq., Pres't Milwaukee & Miss. R.R., Milwaukee.

S. RYDER Esq., V. Pres't Terre Haute & Alton Railroad,

Alton, Ill.

Notice to Brick Makers.

THE undersigned wishes to contract for One Million Three Hundred Thousand of hard burnt brick, best quality, and of the ordinary dimensions, to be delivered as follows:

At Petersburg, Va. 600,000
At the Entrance Lock of the Dismal Swamp Canal

near Norfolk, Va. 200,000
And at Suffolk, Va. 500,000

The brick to be inspected at the point of delivery.

Parties proposing may bid for the supply of either or all of the three lots, stating the time within which they will deliver the quantity proposed for.

They will send the undersigned a sample of the brick they would agree to deliver and define in their bid its dimensions.

WILLIAM MAHONE,
Chief Engr Norfolk and P. R. R.

NORFOLK, Va., May 31st, 1856. 423

FOR SALE.

TWO LOCOMOTIVE ENGINES, built by the Taunton Locomotive Manufacturing Company, of the following dimensions:

Gauge, 4 feet 8½ inches.

Boiler, 46 inches in diameter.

Flues, Copper, 134—11 feet 6 inches long, 2 in. diameter.

Fire-box, 50 by 39 inches inside.

Cylinder, 16 inches diameter, 20 in. stroke.

Engines have 4 six-foot drivers, with truck; inside connected with 7 inch crank, V hooks, and variable cut off.

Tenders have double trucks and tanks of 2,000 gallons capacity.

These Engines cost \$9,000 each, and have been used about one year, have been recently fitted up and are in good order, for workmanship and economy in fuel, will compare favorably with any in the country.

We can sell them on terms that would make them a bargain to the purchaser.

Apply to BRIDGES & BROTHER,
64 Courtlandt st., N. Y.

TO CONTRACTORS.

PETTESS' ROCK DRILL.

WILL penetrate the hardest rock in excavations, at the rate of ten feet an hour, with the aid of two men. Three blows are given at each revolution. This Drill is very portable, the fly-wheels serving as rollers in changing its position; it is entirely self-adjusting and weighs altogether but 400 lbs. Price \$100 cash. A working model may be seen at this office where orders are solicited.

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Railroad Iron.

1,500 TONS New York and Erie pattern 57 lbs. per linear yard, on the way from English shipping port to New York. For sale by

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BALL'S PATENT JACK SCREW.



No.	Stand.	Size.	Net Rise.	Whole Height.	Price.
1.	8 in.	12 in.	9 in.	17 in.	\$8
2.	12 in.	20 in.	17 in.	30 in.	11
3.	16 in.	28 in.	24 in.	40 in.	14
4.	20 in.	36 in.	33 in.	56 in.	16
5.	24 in.	42 in.	39 in.	62 in.	20

BRIDGES & BROTHER,
64 Courtlandt st., N. Y.

English Blister Steel.

20 TONS on hand, for sale by

THEODORE DEHON,
10 Wall st., near Broadway,
NEW YORK.

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OFFICE OF STATE ENGINEER BURKAVISTA,
Orange Mill Post Office.

St. Johns River, Fla., August 20th, 1855.

SEALED PROPOSALS will be received at this office until the 20th day of August, 1856, for constructing a Canal with its necessary appendages, such as Lift Locks, Guard Locks, Basins, &c., from Lake Harney on the St. Johns river, to Indian river, a distance of thirteen miles and 8,410 feet; authorized by the General Assembly of the State of Florida at its session of 1854 and '55, entitled "An Act to provide for and encourage a liberal system of Internal Improvements in this State."

Proposals will specify, the amount for which the work will be done; the mode and manner in which payments are to be made, whether in Lands, or Money, or portions of each.

Maps, Profiles, and Estimates can be seen at this office, and any information obtained by addressing the undersigned at "Orange Mill Post Office, St. Johns River, Florida."

Proposals will be received for constructing a RAILROAD over the same ground.

P. L. DANOH,
State Engineer, State of Florida.

1856

TONS New York and Erie pattern 57 lbs. per linear yard, on the way from English shipping port to New York. For sale by

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Augustus Schwaab,

CIVIL ENGINEER, MACON, GEORGIA.

Is prepared to execute work in all the branches of his profession; all kinds of surveys, railroad surveys and locations, plans, estimates, topographical maps and reports for same, surveys of plantations and swamp lands, and designs and estimates for drainage of lands, water works and river improvements. All kinds of contract work measured and reported in detail; plans and specifications furnished for bridges, private and public buildings. He has held responsible situations on the construction of Georgia railroads for the last seven years, and has given his attention to all the details of railroad construction, from the surveys to the erection of the largest depots and workshops, which gives him great facility to furnish railroad companies with reliable and practical designs of any kind they may want, and if required to superintend the execution of them. The best references and recommendations can be produced.

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To Civil Engineers.

WHITE'S PATENT SILVER FOUNTAIN PEN CASE
is particularly recommended to Engineers engaged in
field work.

This is the only fountain pen we know of, that will not leak in the pocket, or feel too fast in using. The feed of this is perfectly under the control of the writer, who may use it without danger from blots or discoloration of the clothes. Price \$3. They are adapted to all styles of pen. They will be sent by mail to any address upon the receipt of the price.

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We have on hand and for sale, of County Bonds—

Hardin County (Ky.), 6 per cts. | Davidson Cty (Tenn.), 6 p.cts
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Also a variety of CITY, COUNTY, and RAILWAY SECURITIES in smaller lots. April 30th, 1856.

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CHAS. A. MEIGS, late Cashier Am. Ex. Bank.
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REFERENCES: American Exchange Bank, Bank of the Republic, Metropolitan Bank, Merchants' Bank. 1y18

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PARTICULAR attention given to the Transhipment of Iron &c., in Transits for the Western Lake Ports and to the Shipment of Rail in Great Britain.

Quincy, Dec. 2 1856.

VALVE SEAT PLANERS,

FOR Planing Valve Seats, without detaching the cylinders from the engine. This Machine is now ready.

For sale by BRIDGES & BROTHER,

64 Courtland st., N. Y.

JAMES WINSLOW

RETIREES this day from the firm of WINSLOW, LANIER & CO. The business will be continued under the same name by R. H. WINSLOW and JAMES F. D. LANIER, at No. 52 Wall st. Either of the partners will sign in liquidation.

R. H. WINSLOW.

J. F. D. LANIER.

NEW YORK, May 1, 1856. 1m20 JAMES WINSLOW.

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To Civil Engineers and Contractors.

JUST PUBLISHED—A set of Tables for finding, at a glance, the true cubical content of Excavation and Embankments for all Bases, and for every variety of Ground and Side Slopes by M. E. LYONS, Associate Engineer, Lebanon Valley R. R.

SHEET NO.	SHEET NO.
1. General Table for all Bases	13. for Base 18ft. Slop. 1/4 to 1 and all Slopes.
2. For Side Hill Cuts and Fills	14. " 20 " 1/4 to 1
3. Base 12 ft. Slopes 1/2 to 1/16.	15. " 24 " 1/4 to 1
4. " 14 " 1/2 to 1/17.	16. " 24 " 1/4 to 1
5. " 15 " 1/2 to 1/18.	17. " 25 " 1/4 to 1
6. " 15 " 1 to 1/19.	18. " 28 " 1/4 to 1
7. " 15 " 1/2 to 1/20.	19. " 30 " 1 to 1
8. " 16 " 1/2 to 1/21.	20. " 30 " 1/4 to 1
9. " 16 " 1 to 1/22.	21. " 30 " 1/4 to 1
10. " 18 " 1/2 to 1/23.	22. " 32 " 1 to 1
11. " 18 " 1 to 1/24.	23. " 32 " 1/4 to 1
12. " 18 " 1 to 1	24. " 32 " 1/4 to 1

The Tables are printed in clear, bold type on tinted paper; sheets 25x16 inches. They may be used by candle-light without injuring the eye-sight. Each sheet is complete in itself, and embraces all that is wanted in connection with the Base or Slope designated, whether on level or side hill cross section.

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THIS work is designed as a pocket companion, and embraces all the necessary tables for prosecuting railroad surveys, in the most compact form.

It is subdivided as follows:

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Office 123 Chambers st.

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Little Miami Railroad, Cincinnati, Ohio.

James Converse,
Chief Engineer Galveston, Houston & Henderson Railroad,
Galveston, Texas.

Alfred W. Craven,
Chief Engineer Croton Aqueduct, New York.

Charles W. Copeland,
Steam Marine and Railway Engineer,
64 Broadway, New York.

Davidson, M. O.,
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51 Exchange Plaza, BALTIMORE, Md.

C. Floyd-Jones.,
Division Eng'r 3d and 12th Divisions Illinois Central R. R.
Vandalia, Ill.

Gay, Edward F.,
Civil Engineer, Philadelphia, Pa.

Gilbert, Wm. B.,
Syracuse and Binghamton Railroad, Syracuse, N. Y.

Gzowski, Mr.,
St. Lawrence and Atlantic Railroad, Toronto, Canada.

Grant, James H.,
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Theodore D. Judah,
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Sacramento, Cal.

Robert B. Gorsuch,
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Chief Engineer Pittsburgh and Steubenville, and Chartiers Valley
Railroads, Pittsburg, Pa.

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Mills, John B., Civil Engineer,
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Osborne, Richard B.,
Civil Engineer, Office 13 South 4th st., Philadelphia.

Prichard, M. B.,
East Tenn. and Georgia Railroad, Knoxville, Tenn.

W. Milnor Roberts,
Chief Engineer Alleghany Valley Railroad, Pittsburgh, Pa.

Roberts, Solomon W.,
Ohio and Pennsylvania Railroad, Pittsburgh, Pa.

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Charles L. Schlatter,
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Shipman & Hammond,
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Chief Eng'r Bytown and Prescott Railway, Prescott, Canada.

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VOSE, LIVINGSTON & CO.,
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SIGNAL LAMPS,
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OF EVERY DESCRIPTION,
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Orders by Post, or otherwise, will be punctually attended to.

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Six Railroad Locomotives at Auction.

ON WEDNESDAY, June 25th, at 12 o'clock, on the premises at the shops of the Boston and Lowell Railroad Corporation, in West Cambridge,

Six second hand Locomotives and Tenders which are deemed too light for the use of that Company. Three of said engines weigh 16 tons each with fuel and water in, and are of the following distinctive dimensions—cylinders, 12 inches diameter, 18 inches stroke of piston, arranged with inside connection, 2 driving wheels of 5 feet diameter, 4 truck wheels, 30 inches diameter, with boilers, furnaces, &c., in due proportion. They were built by the Locks and Canal Company of Lowell. The other three engines are still lighter, having cylinders of 11 in. diameter and 10 inches stroke of piston, 2 driving wheels, 5 ft. in diameter, also of inside connection; they were built by the same Company.

The above engines are suitable for light service either of passenger, freight or gravel trains, and having been built by the Locks and Canal Company whose character for excellence of manufacture stood so deservedly high, are strongly recommended for their qualities to purchasers. Terms at sale.

Illinois Central R. R. Co.
FARM LANDS FOR SALE.

THE ILLINOIS CENTRAL RAILROAD COMPANY IS NOW PREPARED TO SELL OVER TWO MILLION OF ACRES OF FARMING LANDS, in tracts of 40 acres and upwards, on long credits and at low rates of interest.

These lands were granted by the Government to aid in the construction of this railroad, and include some of the richest and most fertile prairies in the State, interspersed here and there with magnificent groves of oak and other timber. The road extends from Chicago, on the north-east, to Cairo at the South, and from thence to Galena and Dunleith, in the north-west extreme of the State, and as all the lands lie within fifteen miles on each side of this road, ready and cheap means are afforded by it for transporting the products of the lands to any of those points and from thence to eastern and southern markets. Moreover, the rapid growth of flourishing towns and villages along the line, and the great increase in population by immigration, &c., afford a substantial and growing home demand for farm produce.

The soil is a dark, rich mould, from one to five feet in depth, is gently rolling and peculiarly fitted for grazing cattle and sheep, or the cultivation of wheat, Indian corn, &c.

Economy in cultivating and great productiveness are the well-known characteristics of Illinois lands. Trees are not required to be cut down, stumps grubbed, or stone picked off, as is generally the case in cultivating new lands in the older States. The first crop of Indian corn, planted on the newly broken sod, usually repays the cost of plowing and fencing.

Wheat sown on the newly turned sod is sure to yield very large profits. A man with a plow and two yoke of oxen will break one and a-half to two acres per day. Contracts can be made for breaking, ready for corn or wheat, at from \$2 to \$2.50 per acre. By judicious management, the land may be plowed and fenced the first, and under a high state of cultivation the second year.

Corn, grain, cattle, &c., will be forwarded at reasonable rates to Chicago, for the Eastern market, and to Cairo for the South. The larger yield on the cheap lands of Illinois over the high-priced lands in the Eastern and Middle States, is known to be much more than sufficient to pay the difference of transportation to the Eastern market.

Bituminous coal is mined at several points along the road, and is a cheap and desirable fuel. It can be delivered at several points along the road at \$1.50 to \$4 per ton; wood can be had at the same rates per cord.

Those who think of settling in Iowa or Minnesota should bear in mind that lands there, of any value, along the water courses and for many miles inland, have been disposed of—that for those located in the interior, there are no conveniences for transporting the produce to market, railroads not having been introduced there. That to send the produce of these lands one or two hundred miles by wagon to market, would cost much more than the expense of cultivating them; and hence, Government lands thus situated, at \$1.25 per acre, are not so good investments as the land of this Company at the prices fixed.

The same remarks hold good in relation to the lands in Kansas and Nebraska; for although vacant lands may be found near the water courses, the distance to market is far greater, and every hundred miles the produce of those lands is carried

either in wagons, or interrupted water fashions increases the expenses of transportation, which must be borne by the settlers, in the reduced price of their products; and to that extent precisely are the incomes from their farms, and of course on their investments, annually and every year reduced.

The great fertility of the lands now offered for sale by this Company, and their consequent yield over those of the Eastern and Middle States, is much more than sufficient to pay the difference in the cost of transportation, especially in view of the facilities furnished by this road, and others with which it connects, the operations of which are not interrupted by the low water of Summer, or the frost of Winter.

PRICE AND TERMS OF PAYMENT.

The price will vary from \$5 to \$25, according to location, &c. Contracts for deeds may be made during the year 1856, stipulating the purchase money to be paid in five annual installments. The first to become due in two years from the date of contract, and the others annually thereafter. The last payment will become due at the end of the sixth year from the date of the contract.

INTEREST WILL BE CHARGED AT ONLY THREE PER CENT. PER ANNUM.

As a security to the performance of the contract, the first two years' interest must be paid in advance, and it must be understood that at least one-tenth of the lands purchased shall yearly be brought under cultivation. Longer credits, at 6 per cent. per annum, may be negotiated by special application. Twenty per cent. from the credit price will be deducted for cash. The Company's construction bonds will be received as cash.

READY FRAMED FARM BUILDINGS, WHICH CAN BE SET UP IN A FEW DAYS, CAN BE OBTAINED FROM RESPONSIBLE PERSONS.

They will be 12 feet by 20 feet, divided into one living and three bedrooms, and will cost, complete, set up on ground chosen anywhere along the road, \$150 in cash, exclusive of transportation. Larger buildings may be contracted for at proportionate rates. The Company will forward all the materials for such buildings over their road promptly.

Special arrangements with dealers can be made to supply those purchasing the Company's lands with fencing materials, agricultural tools, and an outfit of provisions in any quantity, at the lowest wholesale prices.

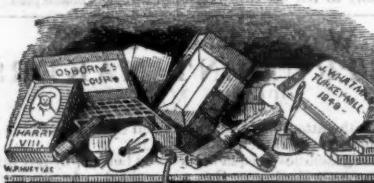
It is believed that the price, long credit, and low rate of interest, charged for these lands, will enable a man with a few hundred dollars in cash, and ordinary industry, to make himself independent before all the purchase money becomes due. In the mean-time, the rapid settlement of the country will probably, have increased their value four or five-fold. When required, an experienced person will accompany applicants, to give information and aid in selecting lands.

Circulars, containing numerous instances of successful farming, signed by respectable and well-known farmers living in the neighborhood of the railroad lands, throughout the State—also, the cost of fencing, price of cattle, expense of harvesting, threshing, &c., by contract—or any other information—will be cheerfully given, on application, either personally or by letter, in English, French, or German, addressed to

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5th. The easiest and least tiresome pavement to ride upon, because most even of surface.

6th. The least noisy pavement to use or reside near.

7th. The best pavement ever used, everything desirable considered.

This Company is enabled to furnish cities and others with an Iron Pavement for every use, at a reduced price. They will contract to lay it down upon any graded street, of superior strength, beauty, and perfection to that recently laid down in Boston, or that in Nassau street, fronting the Post Office, in this city, for

\$5 to \$6.50 PER SUPERFICIAL YARD,

in substitution for any existing pavement. This price is over \$4 per square yard less than the first laid down in Boston cost that city; AND \$1 LESS PER YARD THAN THAT RECENTLY LAID DOWN IN BOSTON COST; AND IS \$1 PER SQUARE YARD LESS THAN THE RUSS PAVEMENT HAS COST; that has so beautified, yet rendered most dangerous and expensive to man, and beast, and vehicle, a large extent of Broadway, and some other streets of New York city.

This pavement is also the best and cheapest for all railroad tracks, where horses are employed, and for all highway railroad crossings, now usually made of plank, which are subject to constant disorder and repair.

Lighter and less expensive patterns (averaging from \$1 to \$3 PER YARD) are furnished for walks in public parks and grounds, also for side walks, private lanes, yards, foot-ways, cellars, and approaches to stables—each being most permanent, cleanly, and ornamental.

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The municipal authorities of cities, and directors of railroad companies, and all enterprising citizens who wish to blend utility with embellishment of their private grounds, residences, &c., are specially invited to investigate this subject. The surpassing usefulness of the Iron Pavement has been too well established in the public streets of Boston as well as in a section of Nassau street, in this city, to require experiment or argument to uphold it.

All additional information that may be desired will be promptly communicated, and orders promptly executed, by letter or in person, to the undersigned, GENERAL MANAGERS OF THE COMPANY'S BUSINESS, AT THEIR OFFICE IN THIS CITY, NOS. 8 AND 10 WALL STREET.

We are also allowed to refer for general information on the subject, to the gentlemen whose names are subjoined, as Honorary and Consulting Directors, not interested as shareholders in the Company's business.

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